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### **Perinatal Hepatitis B Prevention Program (PHBPP)**

### Michigan Perinatal Hepatitis B Prevention Program Staff:

Manager:	Patricia Vranesich	517-335-8159	vranesichp@michigan.gov
Coordinator:	Pat Fineis	517-335-9443	fineisp@michigan.gov
Surveillance Specialist:	Kari Tapley	313-456-4431	tapleyk@michigan.gov
Case Manager/SE MI:	Sallie Pray	313-456-4432	prays@michigan.gov
Case Manager/Out-state:	Marcy Smith	517-335-8122	smithm7@michigan.gov

**Mission:** To identify hepatitis B surface antigen-positive (HBsAg-positive) women

prenatally or at delivery for each pregnancy so that their infants, household and sexual contacts can be tested and treated to prevent the spread of the hepatitis B

virus (HBV).

**Surveillance:** Statewide, an average of 300 infants born to HBsAg-positive women is reported

annually. Based on Centers for Disease Control and Prevention (CDC) estimates,

396-597 infants born to HBsAg-positive women should be identified annually.

**Prevention:** Prevention of perinatal hepatitis B transmission requires the coordinated transfer of

information between laboratories, primary care providers, hospitals, and the

local/state health departments to ensure that all:

• Pregnant women are screened for HBsAg, all HBsAg-positive results are reported to the local health department (LHD) in the county where the patient resides within 24 hours, and the results are sent to the delivery hospital with the prenatal care record.

- Household and sexual contacts of HBsAg-positive pregnant women are identified, tested and immunized if susceptible.
- Infants of HBsAg-positive women receive appropriate prophylaxis and postvaccination serology.
- All infants receive the birth dose of hepB vaccine prior to hospital discharge.

To view the manual in its entirety or to obtain additional copies go to www.michigan.gov/hepatitisB.

See the 12/23/05 MMWR: "A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States" for the latest Advisory Committee on Immunization Practices (ACIP) recommendations, at <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm</a>.



### **Your Role in the Perinatal Hepatitis B Prevention Program (PHBPP)**

### If you work in a laboratory:

- Report all hepatitis B surface antigen-positive (HBsAg-positive) results to the local health department (LHD) in the county where the patient resides within 24 hours of discovery
- Report all HBsAg results to the ordering physician

### If you provide prenatal care:

- Test every pregnant woman during each pregnancy for HBsAg
- Inform pregnant women of their HBsAg status
- Send copy of HBsAg test result for current pregnancy with prenatal records to delivery hospital
- Report all HBsAg-positive pregnant women to the LHD within 24 hours
- Counsel HBsAg-positive pregnant women about their status and refer for appropriate care
- Contact the pediatric provider to communicate the woman's HBsAg-positive status and the need for hepatitis B (hepB) vaccination and hepatitis B immune globulin (HBIG) for the infant
- Assess HBsAg-negative pregnant woman's risk for hepatitis B infection
- Counsel HBsAg-negative pregnant woman on methods to prevent hepatitis B transmission
- Vaccinate pregnant HBsAg-negative women if high risk
- Retest high risk pregnant HBsAg-negative women in their last trimester

### If you work in the hospital labor and delivery unit or in the nursery unit:

- Review and record the maternal HBsAg test result for the current pregnancy on both labor and delivery record and on infant's delivery summary sheet
  - o If a woman presents with an unknown HBsAg status or with risk factors, test STAT
  - o If STAT test is HBsAg-positive, report to the LHD within 24 hours
- Give all infants single-antigen hepB vaccine at birth
- Give all infants born to HBsAg-positive women single-antigen hepB vaccine and HBIG within 12 hours of birth
- Report administration of HBIG and hepB on the electronic birth certificate (EBC) worksheet
- Record the maternal HBsAg testing date and result on all newborn screening (NBS) cards
- Report all HBsAg-positive women and the HBIG and hepB administration to the PHBPP

### If you provide pediatric care:

- Know the maternal HBsAg status for all infants to whom you provide care
- Complete the recommended hepB vaccine series and post-vaccination serology for all infants born to HBsAg-positive women
  - o If infant is HBsAg <u>and</u> anti-HBs negative, repeat three doses of hepB vaccine and retest one month later
  - o If the infant is HBsAg-positive, counsel the family and refer the infant for appropriate care
- Record vaccine administration in the Michigan Care Improvement Registry (MCIR)
- Report hepB administration and post-vaccination serology results to the PHBPP

### If you provide health care to a contact of an HBsAg-positive woman:

- Identify, test and treat all household and sexual contacts of women who are HBsAg-positive
- Counsel HBsAg-positive contacts and refer them for appropriate care
- Give susceptible contacts three doses of hepB vaccine and complete post-vaccination serology
- Record vaccine administration in the Michigan Care Improvement Registry (MCIR)
- Report hepB administration and post-vaccination serology results to the PHBPP



### Perinatal Hepatitis B Prevention Program (PHBPP) Services

### **Universal Hepatitis B Vaccination Program:**

Hospitals who are enrolled in this program receive free hepatitis B (hepB) vaccine to give to all infants at birth. This service acts as a "safety net" to prevent both horizontal and vertical transmission.

### **Hepatitis B vaccine and hepatitis B immune globulin (HBIG):**

Infants, household and sexual contacts enrolled in the perinatal program are eligible for free hepB vaccine, HBIG, and testing.

### Free Hepatitis B test kits are available for:

- Pregnant women who do not have insurance or Medicaid, for the initial prenatal work-up and for re-testing if high risk
- Infants born to hepatitis B surface antigen-positive (HBsAg-positive) women after completion of the hepB vaccine series
- Household and sexual contacts of HBsAg-positive pregnant women

### **Case management services:**

Educational information, support and tracking are provided to ensure hepatitis B vaccine series completion and testing. These services are available to all infants, household and sexual contacts associated with the pregnant HBsAg-positive woman reported to the PHBPP.

### **Guide to Perinatal Hepatitis B Prevention:**

A comprehensive manual is available at <a href="www.michigan.gov/hepatitisB">www.michigan.gov/hepatitisB</a> with sections specifically designed for:

- OB/GYN Providers
- Laboratories
- Hospitals
- Local Health Departments
- Family Practice Providers
- Pediatric Care Providers

### **Educational sessions:**

- Perinatal Hepatitis B Prevention with 1.0 contact hours
- Hepatitis A-E with 1.5 contact hours
- Hepatitis A-E and post-exposure prophylaxis with 1.5 contact hours

If you have any questions, or for additional information on how to obtain these services contact the PHBPP staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.



### Michigan Infant Dies from Perinatal Hepatitis B Virus (HBV) Infection

A three-month-old infant died from acute HBV infection due to an error in reporting. After a review of provider and hospital records, it was determined that the infant's mother was chronically infected with HBV and tested hepatitis B surface antigen-positive (HBsAg-positive) during her pregnancy. Unfortunately, the test results were not reported from the laboratory to the local health department (LHD), and the provider inaccurately reported the mother's results as HBsAg-negative to the delivery hospital.

Since the information from the prenatal care provider indicated that the infant's mother was negative for HBV, the infant did not receive hepB vaccine or hepatitis B immune globulin (HBIG) as recommended for all infants born to HBsAg-positive women. The infant became ill at three months of age and died less than two weeks later due to fulminant HBV infection.

This tragedy illustrates the necessity that all laboratories and ordering physicians comply with Michigan law. It is absolutely critical that every HBsAg-positive result for pregnant women is reported to the LHD and to the delivery hospital.

### What Happens to Infants Born to HBsAg-positive Women?

**WITHOUT** HepB vaccine or HBIG:

- 90% will be at risk for chronic infection
- 25% of those infected will die due to chronic liver disease

**WITH** HepB vaccine alone in a 3 or 4 dose series started at birth:

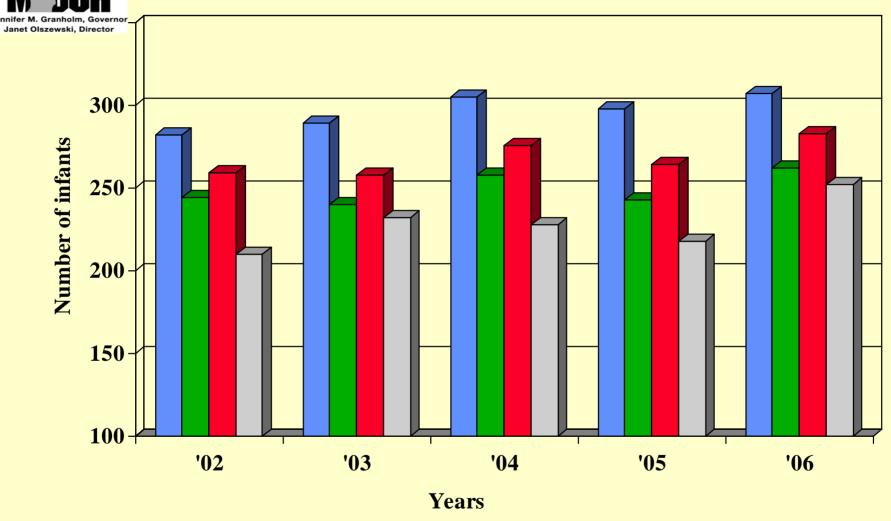
• 70% - 95% will be protected from getting HBV infection

**WITH** HepB vaccine and HBIG started at birth:

• 80% - 95% will be protected from getting HBV infection



## Perinatal Hepatitis B Prevention Program

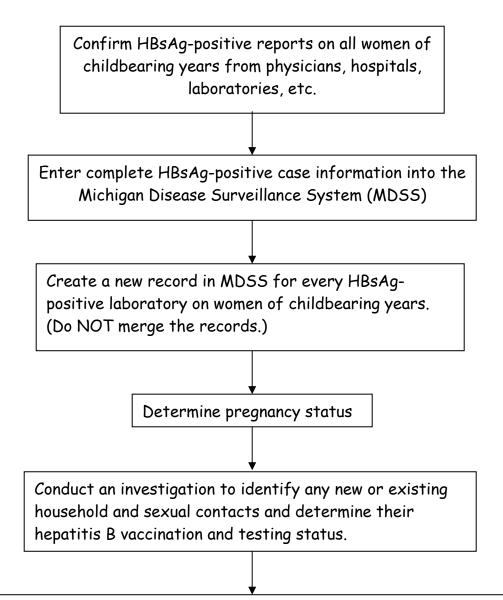


- Births to HBsAg-positive women
- HBIG & 3 by 12 months

- HBIG & 3 by 8 months
- **■** Post serology



# Local Health Department Responsibilities in Reporting Hepatitis B Surface Antigen-Positive (HBsAg-positive) Pregnant Women



Forward a completed <u>Perinatal Hepatitis B Intake Form</u> and a copy of the pregnant woman's HBsAg-positive test result to the MDCH Perinatal Hepatitis B Prevention Program (PHBPP) by fax at 517-335-9855 or in southeast (SE) Michigan at 313-456-4427. To contact the PHBPP staff, call 517-335-8122 or 800-964-4487. In SE Michigan, call 313-456-4431 or 313-456-4432.



### **Local Health Department Role in Case Management**

The Perinatal Hepatitis B Prevention Program (PHBPP) Mission: To identify hepatitis B surface antigen-positive (HBsAg-positive) women prenatally or at delivery so that their infants, household and sexual contacts can be tested and treated to prevent the spread of hepatitis B virus (HBV).

### Local Health Department (LHD) Role:

- 1. Determine pregnancy status for all reported HBsAg-positive women of childbearing years If pregnant:
  - Verify if both prenatal care provider and lab reported the HBsAg-positive result to the LHD
  - Follow-up with both prenatal care provider and lab if they did not report to help them understand reporting requirements and the PHBPP
  - Complete case information in the Michigan Disease Surveillance System (MDSS) and report to the PHBPP
- 2. Share information and coordinate case management responsibilities with the PHBPP
- 3. Contact HBsAg-positive pregnant woman
  - Explain what it means to be infected with HBV
  - Explain how she can take care of herself including regular follow-up by a medical specialist
  - Explain the care her infant will need
  - Explain the care her household and sexual contacts will need
  - Verify all household and sexual contacts, their names, dates of birth, dates of hepatitis B (hepB) vaccinations and dates and results of any hepB blood tests
  - Offer PHBPP services of vaccination and testing for the infant, household and sexual contacts

For questions or assistance please call the PHBPP staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

# REPORTABLE DISEASES IN MICHIGAN

### A Guide for Physicians, Health Care Providers and Laboratories

The following is a list of conditions that should be reported to the local health department without delay if the agent is identified by clinical diagnosis, direct examination, culture, serology, molecular techniques or by histopathology.

Acquired Immunodeficiency Syndrome (AIDS)

Avian influenza

**Bacillus anthracis (Anthrax)** 

Blastomyces dermatitidis

Bordetella pertussis (**Pertussis**)

Borrelia burgdorferi (Lyme Disease)

**Brucella species** 

Burkholderia pseudomallei

Burkholderia mallei

Calymmatobacterium granulomatis

Campylobacter jejuni

Chlamydia psittaci (**Psittacosis**)

Chlamydia trachomatis (**Genital infections**), (**LGV**)

Chlamydia trachomatis (**Trachoma**) **Clostridium botulinum** (**Botulism**)

Clostridium tetani (Tetanus)

Coccidioides immitis (Coccidioidomycosis)

**Corynebacterium diphtheriae** (**Diphtheria**)

Coxiella burnetii (Q Fever)

Cryptococcus neoformans

Cryptosporidium species

Cyclospora species

Dengue virus

Ehrlichia species

Encephalitis, viral

California serogroup

Eastern Equine

Powassan

St. Louis

Western Equine

West Nile

Unspecified

Entamoeba histolytica (Amebiasis)

Escherichia coli, O157:H7 and all other shiga toxin

positive serotypes

Francisella tularensis (Tularemia)

Giardia lamblia

Guillain-Barre Syndrome

Haemophilus ducreyi (Chancroid)

Haemophilus influenzae, <15 years of age, sterile site

Hantavirus

 $Hemolytic\ Uremic\ Syndrome\ (\textbf{HUS})$ 

Hemorrhagic fever viruses

Hepatitis, viral

Hepatitis A virus, (Anti-HAV IgM)

Hepatitis B virus, (**HBsAg**)

within 24 hours on pregnant women

Hepatitis C virus, (**Anti-HCV**)

Hepatitis, non-ABC

Histoplasma capsulatum

HIV, (Confirmed positive HIV serology and detection tests; CD4 counts/percents and all viral loads on

people already known to be infected)

Influenza virus (Weekly aggregate counts)

Kawasaki Disease

Leptospira species

Legionella species

Listeria monocytogenes

Meningitis, virál

Meningitis, bacterial

Measles virus (**Rubeola**)

Mumps virus

Mycobacterium bovis

Mycobacterium leprae (Leprosy)

Mycobacterium tuberculosis (Tuberculosis)

Neisseria gonorrhoeae (**Gonorrhea**)

Neisseria meningitidis, sterile sites (Meningococcal

Disease)

Orthopox viruses (Smallpox, Monkeypox)

Poliovirus

Plasmodium species (Malaria)

Rabies virus

Reye's Syndrome

Rheumatic fever

Rickettsia rickettsii (Rocky Mountain Spotted Fever)

Rickettsia species (Typhus Group)

Rubella virus

Salmonella species

Salmonella typhi (Typhoid Fever)

**Severe Acuté Respiratory Syndrome (SARS)** 

**Shigella species** 

Spongiform Encephalopathy (Includes CJD)

Staphylococcus aureus, vancomycin intermediate/

resistant (VISA/VRSA)

Staphylococcus aureus, (MRSA), outbreaks only

Streptococcus pyogenes, group A, sterile sites

Streptococcus pneumoniae, sterile sites, susceptible/resistant

Toxic Shock Syndrome

Treponema pallidum (Syphilis)

Trichinella spiralis (**Trichinosis**)

Varicella (**Chickenpox**)

Vibrio cholerae (Cholera)

Yellow fever virus

Yersinia enterocolitica

**Yersinia pestis (Plague)** 

Unusual occurrence, outbreak or epidemic of any

disease or condition

### LEGEND

**Green Bold Text** = An isolate or serum sample, where appropriate, is to be submitted to MDCH or other laboratory designated by MDCH. Confirmed positive HIV diagnostic sera are to be submitted for incidence testing.

Report All Listed Conditions to the Local Health Department (see reverse) This reporting is expressly allowed under HIPAA Communicable Disease Rules: R 325.171, 172, 173

# DIRECTORY OF MICHIGAN HEALTH DEPARTMENTS BY COUNTY

In general, health care providers should seek consultation regarding communicable disease

prevention and control services through their local health department.

Please check your phone directory to see if there is a branch office in your community if the number listed is long distance. Write that number here:

FAX		245-4525	882-2204	264-0790	546-6995	293-5453	643-7719	469-5885	723-1477	475-9312	845-0438	796-7864	863-7142	832-6628	839-7908	240-7815	831-3666	785-2217	724-6674	689-7382	858-5639	873-4248	343-1899	884-2358	832-1020	343-1895	732-3285	393-5643	734-3866	366-8921	758-3750	985-2150	273-2452	651-6090	648-2646	341-5230	743-2413	673-7490	621-2725	544-6706	727-7043	871-5363	775-5372
PHONE		245-5581	256-0200	264-5202	546-9850	293-5107	643-1100x14	469-5235	723-3595	475-9977	845-7381	592-0130	863-4451	832-6380	839-7167	240-7800	831-5237	785-4428	724-6246	689-7300	858-1280	873-2193	345-5020	884-4485	832-5532	826-3970	732-1794	396-5266	734-4723	366-9166	758-3800	982-9396	273-2161x200	659-4013x200	648-4098	341-4113	743-2318	673-8114	621-3143	544-6700	727-7006	876-4000	775-9942
AREA		810	231	517	517	906	906	286	231	906	231	231	906	686	231	734	686	686	231	231	248	231	686	906	231	686	686	919	686	686	686	810	569	569	810	906	686	686	569	734	734	313	231
COUNTY OFFICE		Lapeer	Lk Leelanau	Adrian	Howell	Newberry	St. Ignace	Mt. Clemens	Manistee	Negaunee	Ludington	Big Rapids	Menominee	Midland	Lake City	Monroe	Stanton	Atlanta	Muskegon	White Cloud	Pontiac	Hart	West Branch	Ontonagon	Reed City	Mio	Gaylord	Holland	Rogers City	Prudenville	Saginaw	Port Huron	Three Rivers	Sturgis	Sandusky	Manistique	Corunna	Caro	Hartford	Ypsilanti	Wayne	Detroit	Cadillac
HEALTH DEPT.		Lapeer Co	Benzie-Leelanau	Lenawee County	Livingston County	LMAS DHD	LMAS DHD	Macomb County	District #10	Marquette County	District #10	District #10	Delta/Men Dist	Midland County	District #10	Monroe County	Mid-Mich DHD	District 4	Muskegon Co	District 10	Oakland County	District 10	District 2	Western UP Dist	Cent MI Dist	District 2	NW MI Dist	Ottawa County	District 4	Cent MI Dist	Saginaw Co	St. Clair Co	Branch/Hills/St Jo	Branch/Hills/St.Jo	Sanilac	LMAS DHD	Shiawassee Co	Tuscola Co	VanBur-Cass DHD	Washtenaw Co	Wayne Co	Detroit City	District 10
COUNTY		Lapeer	Leelanau	Lenawee	Livingston	Luce	Mackinac	Macomb	Manistee	Marquette	Mason	Mecosta	Menominee	Midland	Missaukee	Monroe	Montcalm	Montmorency	Muskegon	Newaygo	Oakland	Oceana	Ogemaw	Ontonagon	Osceola	Oscoda	Otsego	Ottawa	Pres. Isle	Roscommon	Saginaw	St. Clair	St. Joseph	St. Joseph	Sanilac	Schoolcraft	Shiawassee	Tuscola	Van Buren	Washtenaw	Wayne (out-Wayne)	Detroit	Wexford
FAX	343-1894	387-2224	673-4172	354-0855	533-8450	846-0431	524-6144	543-7737	895-4014	882-2204	926-8129	278-2923	966-1489	445-5278	547-6238	627-9466	635-1701	539-4449	224-4300	348-5346	786-7004	265-2950	543-2656	347-2861	257-3147	426-6952	667-0020	922-4629	875-3747	437-0166	482-9410	269-4181	887-4310	527-5361	343-1892	265-2950	773-4319	788-4373	373-5363	258-2805	632-7084	482-9410	745-2501
PHONE	724-6757	387-2297	673-5411	356-4507	533-8670	846-6541	524-6142	485-7110	895-4001	882-4409	926-7121	279-9561	969-6370	445-5280	547-6523	627-8850	635-1566	539-6731	224-2195	348-7800	786-4111	265-9913	543-2430	347-6014	257-3612	426-9431	667-0200	922-4831	875-3681	437-7395x200	482-7382	269-9721	887-4311	527-5341	362-6183	265-9913	773-5921	768-4420	373-5200	258-8669	632-7100	482-7382	745-4663
AREA	686	906	569	686	231	686	906	517	686	231	569	517	569	569	231	231	906	686	686	686	906	906	517	231	810	686	906	231	686	517	906	686	517	919	686	906	686	517	269	231	616	906	231
COUNTY OFFICE	Harrisville	Munising	Allegan	Alpena	Bellaire	Standish	Hancock	Hastings	Bay City	Benzonia	Benton Harbor	Coldwater	Battle Creek	Cassopolis	Charlevoix	Cheboygan	Sault Ste. Marie	Harrison	St. Johns	Grayling	Escanaba	Iron River	Charlotte	Petoskey	Flint	Gladwin	Bessemer	Traverse City	Ithaca	Hillsdale	Hancock	Bad Axe	Lansing	Ionia	Ta was City	Stambaugh	Mt. Pleasant	Jackson	Kalamazoo	Kalkaska	Grand Rapids	Hancock	Baldwin
HEALTH DEPT.	District 2	LMAS DHD	Allegan County	District 4	NW MI Com Health	Cent MI DHD	Western UP Dist	Barry-Eaton DHD	Bay County	Benzie-Leelanau DHD	Berrien County	Branch/Hills/St Jo	Calhoun County	VanBuren-Cass DHD	NW MI Community	District 4	Chippewa County	Cent MI DHD	Mid-Mich DHD	District 10	Delta-Men Dist	Dick-Iron Dist	Barry-Eaton DHD	NW MI Community	Genesee County	Cent MI DHD	Western UP Dist	Grand Traverse Co.	Mid-Mich DHD	Branch/Hills/St Jo	Western UP DHD	Huron Co	Ingham Co	Ionia Co	District 2	Dick-Iron DHD	Cent MI DHD	Jackson Co	Kalamazoo Co	District 10	Kent Co	Western UP DHD	District 10
COUNTY	Alcona	Alger	Allegan	Alpena	Antrim	Arenac	Baraga	Barry	Bay	Benzie	Berrien	Branch	Calhoun	Cass	Charlevoix	Cheboygan	Chippewa	Clare	Clinton	Crawford	Delta	Dickinson	Eaton	Emmet	Genesee	Gladwin	Gogebic	Gd Trav.	Gratiot	Hillsdale	Houghton	Huron	Ingham	Ionia	Iosco	Iron	Isabella	Jackson	Kalamazoo	Kalkaska	Kent	Keweenaw	Lake



### Acute Hepatitis B Virus – 2000 Case Definition

### **Clinical case definition:**

An acute illness with:

- Discrete onset of symptoms (e.g. fatigue, abdominal pain, loss of appetite, intermittent nausea, vomiting), and
- Jaundice or elevated serum aminotransferase levels

### Laboratory criteria for diagnosis:

- IgM antibody to hepatitis B core antigen (anti-HBc) positive or hepatitis B surface antigenpositive (HBsAg-positive)
- IgM anti-HAV negative (if done)

### **Case classification:**

Confirmed: A case that meets the clinical case definition and is laboratory confirmed

**References:** Division of Viral Hepatitis. Guidelines for Viral Hepatitis Surveillance and Case

Management. Centers for Disease Control and Prevention. January 2005.

www.cdc.gov/ncphi/disss/nndss/print/hepatitisb2000.htm

# Viral Hepatitis Case Report Acute Hepatitis B

Michigan Department of Community Health Communicable Disease and Immunization Division

			Invest	igatio	on Inform	natio	n				
Investigation ID	Part of an outb	reak?		Outb	reak Name				Referral		
	Yes No	Unkn	own								
Investigation Status					Case Statu	S					
_	Completed Si	uperceded	Cancelled	d	Confir	med	Not a Case	Probabi	le Susp	ect	Unknown
Patient Status	•		Patient Statu	s Date		Diagr	nosis Date		Onset D		
Inpatient Outpat	ient Died		mm/dd/yyyy			mm/do	d/yyyy		mm/dd/y	УУУ	
			Pat	ient l	Informat	ion					
Patient ID	First			Last				Middle			
Street Address			l								
City		County			St	ate				Zip	
Home Phone ###-###-###		Ext.			Other P				Ext.		
Domant/Cyandian (na ayina d	if under 10)										
Parent/Guardian (required First	ill under 18)	L	ast				Mid	dle			
			I	Demo	ographic	S					
Sex			Date of Birtl	h		Aş	ge	Age Uni	its		
Male Female	Unknown		mm/dd/yyyy					Day	vs Mon	eths	Years
<b>Race</b> Caucasian Africa Asian Unkn		American Other (Sp	Indian/Alaska ecify)	ı Native	ę 	Нам	vaiian/Pacific	Islander			
Ethnicity					Worksites	/School	l	Occ	upations/C	Frade	
Hispanic/Latino	Non-Hispanic/La	itino U	Inknown								
			Ref	erral	Informa	tion					
Person Providing Referral											
First	Last			Pho ###	one +-###-###		Ext.		Email		
Primary Physician											
First	Last			Pho ###	one +-###-###		Ext.		Email		
Street Address	<u> </u>						I				

State

Zip

**County** 

City

Case ID First	Name	Last Name		Viral Hepat	itis Case	Report rev 06/25/2004 Page 2	
	Н	Iospital	Information	on			
Patient Hospitalized	Hospital		Hospital	City		Hospital Record No.	
Yes No Unknown							
Admission Date	Discharge Date			Days Hospitalized			
mm, dd, yyyy	nun/dd/yyyy						
	Clinical Inf	formation	on and Pat	ient History			
Place of Birth:		Did the pa	atient die froi	n hepatitis?		s, specify the date of death:	
USA Other		Yes	No Unk	rnown	mm/c	ld/yyyy	
Reason for Testing: (Check all that apply)	1						
Symptoms of acute hepatitis		Eva	luation of elev	ated liver enzymes			
Screening of asymptomatic pa	1		od / Organ doi				
Screening of asymptomatic pa (e.g., patient requested)	tient with no risk factors	Fold	low-up testing	for previous markei	of vira	ıl hepatitis	
Prenatal screening		Unk	known				
Other	_						
Is the patient symptomatic?	Is or was the patient jaund	diced?	s or was the p	patient pregnant?		, specify the due or delivery date	e:
Yes No Unknown	Yes No Unknov	wn	Yes No	o Unknown			
Diagnosis: (Check all that apply)							
Acute hepatitis A	Acute hepatitis B	Acute he	epatitis C				
Acute hepatitis E	Chronic HBV infection	HCV info	ection (chroni	c or resolved)			
Acute non-ABCD hepatitis	Perinatal HBV infection	Hepatitis	s Delta (co- or	super-infection)			
		Diagno	ostic Tests				
	Test Name					Result	
					:	P=Positive N=Negative UNK=Unknown	n
Total antibody, hepatit:	is A virus [total ar	nti-HAV	]				
IgM antibody to hepatit:	is A virus [IgM anti	L-HAV]					
Hepatitis B surface ant:	igen [HBsAg]						
Total antibody, hepatit:	is B core antigen [T	Cotal ar	nti-HBc]				
IgM antibody, hepatitis	B core antigen [IgM	∕ anti-H	HBc]				
Antibody to hepatitis D	virus [anti-HDV]						
Antibody to hepatitis E	virus [anti-HEV]						
Antibody to hepatitis C	virus [anti-HCV]						
Supplemental anti-HCV as	ssay [e.g., RIBA]						
HCV RNA [e.g., PCR]							
anti-HCV signal to cut-off ratio							
Liver Enzyme Levels at Time of Di	agnosis						
Test Name	Result		τ	Upper Limit Normal		Date of Result	
						mm/dd/yyyy	
ALT (SGPT)							
AST (SGOT)							

Code/Alternate Code/Text Result/Numeric Result

mm/dd/yyyy

mm/dd/yyyy

Case ID Firs	st Name	Last Name	•	Viral Hep	patitis Case Report rev 06/25/2004	Page 5
		Other In	formation			
Local 1			Local 2			
					1	
Name of Person interviewed	R	elationship to pati	ent		Date of interview mm/dd/yyyyy	
Submitted by:	Date mm/dd/yyyy	Health Depa	rtment	P	hone Number ###-###-###	Ext.
	,, 7777					
Comments or Additional Inform	nation					



### **Chronic Hepatitis B Virus - 2007 Case Definition**

### **Clinical description:**

Persons with chronic hepatitis B virus (HBV) infection may have no evidence of liver disease or may have a spectrum of disease ranging from chronic hepatitis to cirrhosis or liver cancer. Persons with chronic infection may be asymptomatic.

### Laboratory criteria for diagnosis:

• IgM antibodies to hepatitis B core antigen (anti-HBc) negative AND a positive result on one of the following tests: hepatitis B surface antigen (HBsAg), hepatitis B e antigen (HBeAg), or hepatitis B virus (HBV) DNA

### OR

• HBsAg positive or HBV DNA positive or HBeAg positive two times at least 6 months apart (Any combination of these tests performed 6 months apart is acceptable.)

### **Case classification:**

**Confirmed:** A case that meets either laboratory criteria for diagnosis

**Probable:** A case with a single HBsAg positive or HBV DNA positive or HBeAg positive lab result

when no IgM anti-HBc results are available

**Comment:** Multiple laboratory tests indicative of chronic HBV infection may be performed

simultaneously on the same patient specimen as part of a "hepatitis panel". Testing performed in this manner may lead to seemingly discordant results, e.g., HBsAg-negative AND HBV DNA-positive. For the purposes of this case definition, any positive result among the three laboratory tests mentioned above is acceptable, regardless of other testing results. Negative HBeAg results and HBV DNA levels below positive cutoff level do not

confirm the absence of HBV infection.

**References:** Division of Viral Hepatitis. Guidelines for Viral Hepatitis Surveillance and Case

Management. Centers for Disease Control and Prevention. January 2005.

www.cdc.gov/ncphi/disss/nndss/print/hepatitisbcurrent.htm

# Viral Hepatitis Case Report Chronic Hepatitis B

Michigan Department of Community Health Communicable Disease and Immunization Division

			Invest	igatic	n Info	rmati	on					
Investigation ID	Part of an outb	reak?			reak Nan					Referral		
										mm/dd/yy	YYY	
T 4 4 C4 4	Yes No	Unkn	own		<b>G G</b>							
Investigation Status		7 1			Case Star		<b>N</b> 7	~	D 1 11	G		77 1
New Active Patient Status	Completed Si	ıperceded				irmed	Not a C		Probable			Unknown
ratient Status			Patient Statu	is Date		mm/	gnosis Dat	ie		Onset Da		
Inpatient Outpat	ient Died											
			Pat	ient I	nforma	ation						
Patient ID	First			Last					Middle			
Street Address												
City		County			1	State					Zip	
•		•									_	
Home Phone		Ext.			Other	Phone				Ext.		
###-###-###						##-####						
Parent/Guardian (required	if under 18)									•		
First		L	ast					Middle	e			
			I	Demo	graphi	cs						
Sex			Date of Birtl	h		A	Age		Age Unit	s		
Male Female	Unknown		mm/dd/yyyy						Days	Mon	ths	Years
<b>Race</b> Caucasian Africa	an American	American	Indian/Alaska	. Native	,	Н	awaiian/Pa	acific Isl	landor			
Asian Unkn		Other (Sp		i ivaiive	•	110	iwanan/1 c	icijic Isi	unuer			
Ethnicity Charles	OWI				Worksite	es/Scho	ol		Occu	pations/C	Frade	
•	Non-Hispanic/La	itino (	Unknown							•		
				orrol	Inform	otion						
Person Providing Referral			KCI	cirai.	111101111	auon						
First	Last			Pho	ne			Ext.	E			
					-###-####							
Primary Physician												
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				"""	<b> ####</b>							
C44 A 3.1												
Street Address												

State

Zip

County

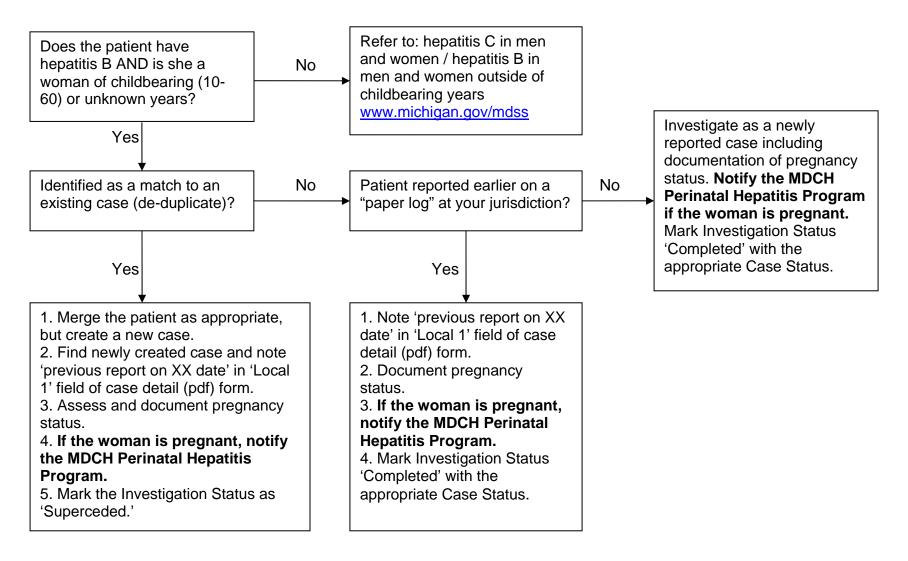
City

Case ID First	Name	Last Name		Viral Hepat	itis Case	Report rev 06/25/2004 Page 2	
	Н	Iospital	Information	on			
Patient Hospitalized	Hospital		Hospital	City		Hospital Record No.	
Yes No Unknown							
Admission Date	Discharge Date			Days Hospitalized			
mm, dd, yyyy	nun/dd/yyyy						
	Clinical Inf	formation	on and Pat	ient History			
Place of Birth:		Did the pa	atient die froi	n hepatitis?		s, specify the date of death:	
USA Other		Yes	No Unk	rnown	mm/c	ld/yyyy	
Reason for Testing: (Check all that apply)	1						
Symptoms of acute hepatitis		Eva	luation of elev	ated liver enzymes			
Screening of asymptomatic pa	1		od / Organ doi				
Screening of asymptomatic pa (e.g., patient requested)	tient with no risk factors	Fold	low-up testing	for previous markei	of vira	ıl hepatitis	
Prenatal screening		Unk	known				
Other	_						
Is the patient symptomatic?	Is or was the patient jaund	diced?	s or was the p	patient pregnant?		, specify the due or delivery date	e:
Yes No Unknown	Yes No Unknov	wn	Yes No	o Unknown			
Diagnosis: (Check all that apply)							
Acute hepatitis A	Acute hepatitis B	Acute he	epatitis C				
Acute hepatitis E	Chronic HBV infection	HCV info	ection (chroni	c or resolved)			
Acute non-ABCD hepatitis	Perinatal HBV infection	Hepatitis	s Delta (co- or	super-infection)			
		Diagno	ostic Tests				
	Test Name					Result	
					:	P=Positive N=Negative UNK=Unknown	n
Total antibody, hepatit:	is A virus [total ar	nti-HAV	]				
IgM antibody to hepatit:	is A virus [IgM anti	L-HAV]					
Hepatitis B surface ant:	igen [HBsAg]						
Total antibody, hepatit:	is B core antigen [T	Cotal ar	nti-HBc]				
IgM antibody, hepatitis	B core antigen [IgM	∕ anti-H	HBc]				
Antibody to hepatitis D	virus [anti-HDV]						
Antibody to hepatitis E	virus [anti-HEV]						
Antibody to hepatitis C	virus [anti-HCV]						
Supplemental anti-HCV as	ssay [e.g., RIBA]						
HCV RNA [e.g., PCR]							
anti-HCV signal to cut-off ratio							
Liver Enzyme Levels at Time of Di	agnosis						
Test Name	Result		τ	Upper Limit Normal		Date of Result	
						mm/dd/yyyy	
ALT (SGPT)							
AST (SGOT)							

		Lab Results		
Report Date	Test Name	Test Result	Specimen	Collection Da
mm/dd/yyyy		Code/Alternate Code/Text Result/Numeric Result		mm/dd/yyyy

Case ID Firs	st Name	Last Name	Vi	iral Hep	patitis Case Report rev 06/25/2004	Page 4					
	Other Information										
Local 1			Local 2								
	I				T						
Name of Person interviewed	Re	lationship to patie	nt		Date of interview mm/dd/yyyy						
Submitted by:	Date mm/dd/yyyy	Health Depar	tment	P	hone Number ***-***	Ext.					
	mm/dd/yyyy			,	***-***						
Comments or Additional Inforn	l nation										

# Entering and De-duplicating Chronic Hepatitis B Reports for Women of Childbearing Years in the Michigan Disease Surveillance System (MDSS)



The entire MDSS reporting process for hepatitis B and C cases can be found at <a href="https://www.michigan.gov/mdss">www.michigan.gov/mdss</a>



### Perinatal Hepatitis B Virus -1995 Case Definition

### \*Clinical case definition:

Perinatal hepatitis B virus (HBV) infection in the newborn may range from asymptomatic to fulminant hepatitis.

### Laboratory criteria for diagnosis:

• Hepatitis B surface antigen (HBsAg) - positive

### **Case classification:**

HBsAg positivity in any infant aged 1-24 months of age who was born in the United States or in U.S. territories to an HBsAg-positive mother.

### **Comment:**

Infants born to HBsAg-positive mothers should receive hepatitis B immune globulin (HBIG) and the first dose of hepatitis B vaccine within 12 hours of birth, followed by the second and third doses of vaccine at 1 and 6 months of age, respectively. Post-vaccination testing for HBsAg and hepatitis B surface antibody (anti-HBs) is recommended from 3 to 6 months following completion of the vaccine series. If HBIG and the initial dose of vaccine are delayed for more than 1 month after birth, testing for HBsAg may determine if the infant is already infected.

### **References:**

Division of Viral Hepatitis. Guidelines for Viral Hepatitis Surveillance and Case Management. Centers for Disease Control and Prevention. January 2005.

\*The 1995 case definition appearing on this page was re-published incorrectly in the 1997 MMWR Recommendations and Reports titled *Case Definitions for Infectious Conditions Under Public Health Surveillance* [MMWR 1997;46(RR10)] (available at

http://www.cdc.gov/mmwr/preview/mmwrhtml/00047449.htm). Thus, the 1995 and the 1997 versions of this case definition are not identical, and the 1995 version is the correct one.

www.cdc.gov/ncphi/disss/nndss/print/hepatitisviralcurrent.htm

# Viral Hepatitis Case Report Perinatal Hepatitis B Virus Infection

Michigan Department of Community Health Communicable Disease and Immunization Division

			Invest	igatic	n Informa	tion					
Investigation ID	Part of an outh	reak?			eak Name				Referra		
									mm/dd/y	УУУ	
	Yes No	Unkr	nown								
Investigation Status					Case Status						
	Completed S	upercedea	1		Confirmed			Probable			Unknow
Patient Status			Patient Statu	ıs Date		agnosis Da	ite		Onset D	ate	
Inpatient Outpa	tient Died										
			D /		<u> </u>						
D. 4: A. ID	TO: 4		Pat		nformation	1		3.61.11			
Patient ID	First			Last				Middle			
Street Address											
City		County			State					Zip	
Home Phone		Ext.			Other Phon				Ext.	-	
###-###-###					###-###-##	##					
Parent/Guardian (required	d if under 18)										
First		I	Last				Middle	e			
			I	Demo	graphics						
Sex			Date of Birtl		Simplifies	Age		Age Unit	s		
MIFI	77 1		mm/dd/yyyy			Ü				.1	V
Male Female	Unknown							Days	Мог	itns	Years
Race											
Caucasian Afric	an American		ı Indian/Alaska	ı Native	!	Hawaiian/F	Pacific Isl	ander			
Asian Unki	<i>10wn</i>	Other (Sp	oecify)								
Ethnicity					Worksites/Scl	100l		Occu	pations/0	Frade	
Hispanic/Latino	Non-Hispanic/La	atino	Unknown								
			Ref	erral	Informatio	n					
Person Providing Referra	1 ,										
First	Last			Pho			Ext.	E	Cmail		
				"""	-###-####						
Primary Physician	<del>-</del> ,			ъ			E-4	1.	\ <b>!</b>		
First	Last			Pho			Ext.		Cmail		
11150				###	-###-####	l		1			
				###	-###-####						

State

**County** 

City

Zip

Case ID First	Name	Last Name		Viral Hepat	itis Case	Report rev 06/25/2004 Page 2	
	Н	Iospital	Information	on			
Patient Hospitalized	Hospital		Hospital	City		Hospital Record No.	
Yes No Unknown							
Admission Date	Discharge Date			Days Hospitalized			
mm, dd, yyyy	nun/dd/yyyy						
	Clinical Inf	formation	on and Pat	ient History			
Place of Birth:		Did the pa	atient die froi	n hepatitis?		s, specify the date of death:	
USA Other		Yes	No Unk	rnown	mm/c	ld/yyyy	
Reason for Testing: (Check all that apply)	1						
Symptoms of acute hepatitis		Eva	luation of elev	ated liver enzymes			
Screening of asymptomatic pa	1		od / Organ doi				
Screening of asymptomatic pa (e.g., patient requested)	tient with no risk factors	Fold	low-up testing	for previous markei	of vira	ıl hepatitis	
Prenatal screening		Unk	known				
Other	_						
Is the patient symptomatic?	Is or was the patient jaund	diced?	s or was the p	patient pregnant?		, specify the due or delivery date	e:
Yes No Unknown	Yes No Unknov	wn	Yes No	o Unknown			
Diagnosis: (Check all that apply)							
Acute hepatitis A	Acute hepatitis B	Acute he	epatitis C				
Acute hepatitis E	Chronic HBV infection	HCV info	ection (chroni	c or resolved)			
Acute non-ABCD hepatitis	Perinatal HBV infection	Hepatitis	s Delta (co- or	super-infection)			
		Diagno	ostic Tests				
	Test Name					Result	
					:	P=Positive N=Negative UNK=Unknown	n
Total antibody, hepatit:	is A virus [total ar	nti-HAV	]				
IgM antibody to hepatit:	is A virus [IgM anti	L-HAV]					
Hepatitis B surface ant:	igen [HBsAg]						
Total antibody, hepatit:	is B core antigen [T	Cotal ar	nti-HBc]				
IgM antibody, hepatitis	B core antigen [IgM	∕ anti-H	HBc]				
Antibody to hepatitis D	virus [anti-HDV]						
Antibody to hepatitis E	virus [anti-HEV]						
Antibody to hepatitis C	virus [anti-HCV]						
Supplemental anti-HCV as	ssay [e.g., RIBA]						
HCV RNA [e.g., PCR]							
anti-HCV signal to cut-off ratio							
Liver Enzyme Levels at Time of Di	agnosis						
Test Name	Result		τ	Upper Limit Normal		Date of Result	
						mm/dd/yyyy	
ALT (SGPT)							
AST (SGOT)							

Code/Alternate Code/Text Result/Numeric Result

mm/dd/yyyy

mm/dd/yyyy

Case ID Firs	st Name	Last Name	•	Viral Hep	patitis Case Report rev 06/25/2004	Page 5
		Other In	formation			
Local 1			Local 2			
					1	
Name of Person interviewed	R	elationship to pati	ent		Date of interview mm/dd/yyyyy	
Submitted by:	Date mm/dd/yyyy	Health Depa	rtment	P	hone Number ###-###-###	Ext.
	,, 7777					
Comments or Additional Inform	nation					



### Hepatitis B Perinatal Case Report – Infant/Contact

Michigan Department of Community Health (MDCH)

Please complete this form each time a dose of hepatitis B vaccine and/or hepatitis B immune globulin (HBIG) is administered to an infant whose mother has tested hepatitis B surface antigen (HBsAg) positive or when given to her household or sexual contacts. **Mail** this form to MDCH, Immunization Division, PO Box 30195, Lansing, MI 48909; or **fax** to 517-335-9855; or **call** the Perinatal Hepatitis B Prevention staff at 517-335-8122 or 1-800-964-4487. In **southeast Michigan, mail** to MDCH, Immunization Division, Detroit Regional Office, 3056 W. Grand Blvd., Suite 3-150, Detroit, MI 48202; or **fax** to 313-456-4427; or **call** 313-456-4431 or 313-456-4432. Also,

please make sure to update the infant/contact's Michigan Care Improvement Registry (MCIR) record.

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PROVIDER  Hospital or Provider Name														Cor	ınty			
Address																		
City							Zip Code T				Telephone #							
HBsAg POSI	TIVE I	MOTI	IER															
							Medi	Medical Record #					D	Date of Birth / /			/	
Address								City							ip Cod	le		
Social Security	y #				Telephone #			Emergency Contact Nam Telephone #					Name	e &				
Grav		Para			ntry of Birth						laternal Gra		her's C	Country	of Bi	rth		
TEST DATE	RESU	LTS:	(P=POSITIV	E/REA	CTIVE N=N	EGATIV	E/NO	N-RE	ACTI	VE 1	U=UNKNC	)WN)						
HBsAg	/	/	_	□U	HBeAg	1	/	<b>□</b> P	□N	□ U HBeAb / /					□ P	□ N	U	
HBV DNA	1	/		ΠU	Anti-HBc	1	/	<b>□</b> P	□N	N □ U Anti-HBc IgM / / □ P □ N						V 🗖 U		
HBV Viral Lo	ad		Other infec	tions (H	ICV, HIV, other	r STIs, etc	c) 🗖 Y		N 🗖	U	If yes, plea	ase spe	cify:					
Race Ethnicity			sian/PI Hispanic	□ Bla	ack	White pecify)		Ame	erican l	ndia		Alask		tive		Unkno	own Jnkno	own
Does mother n	need an		•				?						/					
									□N									
If yes, treatme	nt start	date	1 1	Treatn	nent brand/dose	:												
INFANT OR	HOUS	EHO	LD/SEXUAL	CONT	ACT (relations	ship of co	ntact)											
Name							DOB /			/	Sex  Male  Female			Female				
Birth Weight (If infant)  Time of Birth (If infant)  AM DPM Medical Record #																		
VACCINE/L						T = =												
Vaccine Date Given Time Given			ven (if infant)					cturer Lab Resul			ts			Test Date				
HBIG	HBIG / /			□ AM □ PM					HBsAg				/ /					
Hep B #1	Hep B #1 / / □ AM □ PM			□ AM □ PM				Anti-HBs				/ /						
Hep B #2 / /					Anti-HBc IgM				/ /									
Hep B #3 / /  FOLLOW-UP CARE PROVIDER OF INFANT OR CONTACT (if d						Anti-HBc					/ /							
FOLLOW-UI	P CAR	E PRO	OVIDER OF	INFAN	T OR CONTA	CT (if di	ifferen	t fron	n abov	e)								
Facility's Name					Provider's Name					_								
Address						City	City Zip 0					ip Code						
Telephone #					County													
Name of Person Completing This Form					Telephone #													



Perinatal Hepatitis B Intake Form
Fax to 517/335-9855 or call 517/335-8122 or 800/964-4487 or in southeast Michigan
Fax to 313/456-4427 or call 313/456-4432

Woman's name			_ Date of bir	th	Social	Security #	
Address				City		Zip	
County Tele	ephone #		Emerge	ncy contact	name & #		
Race: Asian/PI Black W	hite Ame	er Indian	Alaskan Nati	ve Other		Unknown	
Ethnicity: Hispan	nic No	on-Hispanic	U	nknown			
Grav Para Country o	of Birth		Materi	nal Grandmo	other's Coun	try of Birth	
Does the woman need an interp	reter □ Y	□ N If	ves, what lar	nguage			
r			Laboratoi				
					ot tested; U =		¬ T.T
HBsAg/_ / _ □ P	□N □N.	I U U	Repeat	HBSAg	/_ /		JU
Date HBsAg reported /	/ How	reported:	Lab-Electro	nic/Paper	OB Hospi	ital Other	
HBeAg/	$\square P \square N$	□ NT □ U	HBeAb	/_	□ P	$\square$ N $\square$ NT $\square$ U	
Anti-HBc IgM / /	$\square P \square N \square$	□ NT □ U	Anti-H	Bc/_	/_ □ P	$\square$ N $\square$ NT $\square$ U	
HBV DNA/	$\neg P \sqcap N$	□NT□U	HRV V	iral Load			
Other maternal infections/cond	itions ( <b>HCV</b>	, HIV, Oth	er STIs, etc				
LHD refer for care/evaluation?	$\square Y \square N$		Hep B treatm	nent during t	this pregnanc	y? □Y □N □U	
If yes, treatment brand/dose		Tı	reatment star	t date /	_ /		
Physician providing treatment			ovider (P			······································	
PCP/facility name			•	•		_ / _ /	
Address			C	ity		Zip	
Γelephone #	Hosp	oital to deliv	er at				
Reporting information sent to P	CP office?	$\Box Y  \Box N$	N Date	/_ /	_		
	Housel	nold/Sexu	ıal Conta	ct Inforn	nation:		
First/Last Name (relationship)	DOB	HBIG	Hep B #1	Hep B #2	Hep B #3	HBsAg, anti-HBs and/or anti-HBc results	Test Date
	/ /	/ /	/ /	/ /	/ /		/ /
	/ /	/ /	/ /	/ /	/ /		/ /
	/ /	/ /	/ /	/ /	/ /		/ /
Household/sexual contact provi	der nome						
Address		City		Zip	Те	elephone #	
				phone #			



### Local Health Department Responsibilities for Contacts of Hepatitis B Surface Antigen-Positive (HBsAg-positive) Women

Assess immunization status for all contacts and determine if contact needs vaccine or testing. † Draw contact's blood for HBsAg and hepatitis B surface antibody (anti-HBs), and then give the first dose of hepatitis B (hepB) vaccine. \* If positive for HBsAq, the patient is infected If both tests are negative and should be referred for medical follow up. If positive for anti-HBs, patient is immune and Give the second dose of hepB vaccine 1 month does not need additional doses of hepB vaccine. after the first dose. \* Give the third dose of hepB vaccine 4-6 months after the second dose (at least eight weeks after the second dose and at least sixteen weeks after the first dose). \* Repeat the blood test for HBsAg & anti-HBs 1-2 months after the third dose. \* \*Report the vaccination dates and the date and results of the blood tests using the Hepatitis B Perinatal Case Report-Infant/Contact. Also make sure to update the patient's Michigan Care Improvement Registry (MCIR) record. If you have any questions, please call the Perinatal Hepatitis B Prevention Program staff at

517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

### † PLEASE NOTE:

If the patient has documentation they have started the series, complete the series and then test 1-2 months later.



### Follow-up Protocol for Household and Sexual Contacts

**Assess:** Immunization status for all contacts through the Michigan Care Improvement Registry (MCIR)

to determine if hepatitis B (hepB) vaccine or testing is needed. Those with a partially

completed hepB vaccination series should complete the vaccine series and then have follow-up

serology 1-2 months later.

**Test**: Exposed household contacts and sexual partners of women who test positive for hepatitis B

surface antigen (HBsAg) prenatally or at delivery to determine their hepatitis B status. The

following tests should be completed:

**HBsAg:** Determines if they are currently infected with the hepatitis B virus (HBV)

Anti-HBs: (Hepatitis B surface antibody) determines if they have protection against HBV

If both tests are **NEGATIVE**, the contact is susceptible to infection and should receive hepB vaccine. If HBsAg is positive, the patient is infected and should be referred for appropriate medical follow up. If anti-HBs is positive, and the contact had three valid doses of hepB vaccine, they are considered immune and are protected from getting HBV.

**Vaccinate:** All unvaccinated susceptible contacts with three doses of hepB vaccine:

- The first dose should be given at the same visit, but after the blood draw.
- The second dose should be given ONE MONTH after the first dose.
- The third dose should be given FOUR-SIX MONTHS after the first dose (at least eight weeks after the second dose and at least sixteen weeks after the first dose).

If there has been a sexual exposure within the last 14 days to an acutely infected HBsAg-positive woman, or a blood exposure within the last 7 days to an HBsAg-positive woman, the contact should also receive one dose of hepatitis B immune globulin (HBIG\*), calculated at 0.06 ml/kg of body weight.

**Test:** All contacts for HBsAg and anti-HBs one to two months after the third dose of hepB vaccine is

administered.

**Report**: All doses of hepB and HBIG on a <u>Hepatitis B Perinatal Case Report-Infant/Contact Form</u> or

the <u>Provider Reporting Form</u> and mail or fax the information to the Perinatal Hepatitis B Prevention Program (PHBPP). Update the patient's MCIR record and ask for current

telephone and address information.

For questions or assistance, please call the PHBPP staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

<sup>\*</sup>Suggested interval between immune globulin preparations and live virus vaccines is 3 months.



### Local Health Department Responsibilities for Infant(s) Born to Hepatitis B Surface Antigen-Positive (HBsAg-positive) Women

Review the Michigan Care I mprovement Registry (MCIR), and/or the Official I mmunization Record to determine if the infant received the hepatitis B (hepB) vaccine and the hepatitis B immune globulin (HBIG) at birth.

Give a dose of single-antigen hepB vaccine at 1-2 months of age or Pediarix™ or Comvax® at 2 months of age. (If this infant weighed less than 2000 g at birth do not count the birth dose of hepB vaccine as part of the series and give three additional doses.) \*

If using Pediarix<sup>™</sup> or Comvax<sup>®</sup> a dose can be given at 4 months of age.

Give the last dose of single-antigen or Pediarix<sup>™</sup> hepB vaccine at 6 months of age (no sooner than 24 weeks of age), or Comvax® at 12-15 months of age. \*

Draw or arrange with the Perinatal Hepatitis B Case Manager to have the infant's blood tested for HBsAg & hepatitis B surface antibody (anti-HBs) at 9-18 months of age, (3 months after the completion of the vaccine series). \*

If HBsAg and anti-HBs are both negative, begin 2<sup>nd</sup> vaccine series using single-antigen hepB vaccine at (0, 1, 6 month schedule) and repeat the blood test 1-2 months after the second hepB vaccine series. \*

\*Report the vaccination dates and the date and results of the blood tests using the <u>Hepatitis B Perinatal Case Report-Infant/Contact</u> form. Also make sure to update the patient's MCIR record. If you have any questions, please call the Perinatal Hepatitis B Prevention Program staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.



### Follow-up Protocol for Infants Born to Hepatitis B Surface Antigen-Positive (HBsAg-positive) Women

1. Review the Michigan Care Improvement Registry (MCIR), and/or the Official Immunization Record to determine if the infant received the hepatitis B (hepB) vaccine and the hepatitis B immune globulin (HBIG) at birth.

### 2. At 1-2 months of age:

- A. Give the infant a dose of single-antigen hepB vaccine at 1-2 months of age, or Pediarix<sup>TM</sup> (DTaP-HepB-IPV) or Comvax® (HepB-Hib) at 2 months of age, intramuscularly in the anterolateral thigh (at least 4 weeks after the first dose).
- B. Complete a <u>Hepatitis B Perinatal Case Report-Infant/Contact</u> form and mail or fax the information to the Perinatal Hepatitis B Prevention Program (PHBPP).
- C. Flag the infant's chart as a reminder of when the next dose is due, ask the parent for current telephone and address information and update the patient's MCIR record.
- 3. If using Pediarix<sup>TM</sup> or Comvax®, a dose of the hepB vaccine can be given at the 4 month-visit intramuscularly in the anterolateral thigh.
  - A. Complete a <u>Hepatitis B Perinatal Case Report-Infant/Contact</u> form and mail or fax the information to the PHBPP.
  - B. Flag the infant's chart as a reminder of when the next dose is due, ask the parent for current telephone and address information and update the patient's MCIR record.

### 4. At 6 months of age:

- A. Give the infant the last dose of single-antigen hepB vaccine or Pediarix™ at 6 months of age, or if using Comvax® give the last dose at 12-15 months of age, intramuscularly in the anterolateral thigh (at least 8 weeks after the second dose, at least 16 weeks after the first, and no earlier than 24 weeks of age).
- B. Inform the parent that the infant will need a blood test at 9-18 months of age, (3 months after the completion of the hepB vaccine series), to see if the baby has been protected from the hepatitis B virus.
- C. Complete a <u>Hepatitis B Perinatal Case Report-Infant/Contact</u> form and mail or fax the information to the PHBPP.
- D. Flag the infant's chart as a reminder of when the blood test is due, ask the parent for current telephone and address information, and update the patient's MCIR record.

### 5. At nine to eighteen months of age (3 months after the completion of the vaccine series):

- A. Draw or refer the infant for **HBsAg** and hepatitis B surface antibody (**anti-HBs**) testing. To make arrangements for free testing contact the PHBPP case manager.
- B. Complete a <u>Hepatitis B Perinatal Case Report-Infant/Contact</u> form and mail or fax the information to the PHBPP.
- C. Ask the parent for current telephone and address information and update the patient's MCIR record.

If you have questions, or need test kits, please call the PHBPP staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

Hepatitis B Vaccine and Hepatitis B Immune Globulin Administration for Infants

Maternal Status	Infants greater than or equal to 2000 g *	Infants less than 2000 g *
Hepatitis B Surface	Give single-antigen hepatitis B (hepB) vaccine and hepatitis	Give single-antigen hepB vaccine and HBIG within 12
Antigen (HBsAg)	B immune globulin (HBIG) within 12 hours of birth.	hours of birth.
positive		
	Complete the hepB vaccine series with single-antigen	Do not count the hepB birth dose as the first dose. Initiate
	doses at 1-2 and 6 months of age or hepB-containing	the full hepB vaccine series with single-antigen doses at 1,
	combination vaccines given at 2, 4, and 6 months of age, or	2-3 and 6 months of age or hepB-containing combination
	2, 4, and 12-15 months of age depending on the combination product used. (Combination vaccines cannot	vaccines given at 2, 4, and 6 months of age, or 2, 4, and 12-15 months of age depending on the combination
	be given before 6 weeks of age.)	product used. (Combination vaccines cannot be given
	be given before 6 weeks of age.)	before 6 weeks of age.)
	Test for hepatitis B surface antibody (anti-HBs) and HBsAg	actions of the state of the sta
	at 9-18 months of age (3 months after the completion of the	Test for anti-HBs and HBsAg at 9-18 months of age (3
	hepB vaccine series).	months after the completion of the hepB vaccine series).
	If the infant is HBsAg and anti-HBs negative, repeat the 3	
	dose hepB vaccine series and retest 1-2 months after the	If infant is HBsAg and anti-HBs negative, repeat the 3 dose
	completion of the second vaccine series.	hepB vaccine series and retest 1-2 months after the
	If infant is HBsAg-positive, refer to a specialist.	completion of the second vaccine series.
	il illiant is hibs/Ag-positive, refer to a specialist.	If infant is HBsAg-positive, refer to a specialist.
HBsAg status	Test mother STAT for HBsAg.	Test mother STAT for HBsAg.
unknown	January 1	3
	Give single-antigen hepB vaccine within 12 hours of birth	Give single-antigen hepB vaccine and HBIG within 12
	and HBIG within 7 days if mom's status remains unknown	hours of birth if mom's status remains unknown or if found
	or sooner if found to be HBsAg-positive.	to be HBsAg-positive.
	Follow the recommended vaccination schedule.	Follow the recommended vaccination schedule.
HBsAg-negative	Give single-antigen hepB vaccine at birth or prior to	Give single-antigen hepB vaccine to medically stable
11D3Ag-11egative	hospital discharge.	infants at 30 days of chronologic age or at hospital
	nospital discharge.	discharge if before 30 days of chronologic age.
	Follow the recommended vaccination schedule.	and the second s
		Follow the recommended vaccination schedule.
	Anti-HBs and HBsAg testing is not recommended.	
		Anti-HBs and HBsAg testing is not recommended.

<sup>\*</sup> All doses of hepB vaccine and HBIG must be entered into the Michigan Care Improvement Registry (MCIR). This may be done by entering the data directly into the MCIR or on the Electronic Birth Certificate (EBC). It is important that all providers who see the baby in a neonatal intensive care unit (NICU) or in an office enter the dose information into MCIR so that a follow-up provider knows when to give the next dose.

<sup>•</sup> Adapted from: Saari TN and the Committee on Infectious Diseases, Immunization of Preterm and Low Birth Weight Infants. *Pediatrics* 2003; 112:193-198.



## Vaccination Schedule for Infants Born to Hepatitis B Surface Antigen-Positive (HBsAg-positive) Women

Dose	Single-antigen vaccine	Combination Vaccines		
	Engerix-B® or	Pediarix® (DTaP-HepB-IPV)	Comvax®	
	Recombivax HB® (HepB)	(ртар-нерв-гру)	(HepB-Hib)	
1	Birth*	Birth (only use single	Birth (only use single	
		antigen vaccine)*	antigen vaccine)*	
2	1-2 months	2 months	2 months	
3	6 months	4 months	4 months	
4	NA	6 months	12-15 months	

<sup>\*</sup> Both single-antigen hepatitis B (hepB) vaccine (0.5mL) and hepatitis B immune globulin (HBIG) (0.5mL) should be given within 12 hours of birth. HBIG and hepB vaccine should be administered intramuscularly at different sites.

#### **Combination Vaccines**

After single-antigen hepB vaccine is given at birth, an additional 3 doses of a hepB-containing combination vaccines can be given to complete the series, starting at 6 weeks of age for those whom none of the antigens are contraindicated.

Comvax®: The combination hepatitis B and *Haemophilus influenzae* type B (Hib) vaccine Comvax® is NOT to be given at birth. Comvax® is licensed for use as a 3-dose series beginning at 6 weeks of age. This vaccine may be used when neither antigen is contraindicated.

Pediarix®: The combination DTaP-hepatitis B-inactivated poliovirus vaccine Pediarix® is NOT to be given at birth. Pediarix® is licensed for use as a 3-dose series beginning at 6 weeks to 7 years of age. This vaccine may be used when none of the antigens are contraindicated and only as a primary series.

#### **Pre-term Infants**

For pre-term infants who weigh less than 2000 g at birth, administer hepB vaccine and HBIG within 12 hours of birth. The initial hepB vaccine dose should not be counted as part of the 3-dose hepB vaccine series. Three additional doses of hepB vaccine should be administered beginning at chronological age of 1 month.

**Note:** The use of brand names is not meant to preclude the use of other comparable licensed hepB-Hib or DTaP-hepB-IPV combination vaccines.

## **Hepatitis B Facts: Testing and Vaccination**

#### Who should be vaccinated?

The following persons should receive routine hepatitis B vaccination, according to the Centers for Disease Control and Prevention (CDC):

#### Routine vaccination:

- All newborns at birth prior to hospital discharge
- All children and teens ages 0 through 18 years
- All persons who wish to be protected from hepatitis B virus (HBV) infection. CDC states it is not necessary for the patient to disclose a risk factor to receive hepatitis B vaccine.

#### Persons who are at risk for sexual exposure:

- Sexually active persons who are not in long-term, mutually monogamous relationships
- Sex partners of HBsAg-positive persons
- Persons seeking evaluation or treatment for an STD
- Men who have sex with men

#### Persons at risk for infection by percutaneous or mucosal exposure to blood:

- Current or recent injection-drug users
- Household contacts of HBsAg-positive persons
- Residents and staff of facilities for developmentally challenged persons
- Healthcare and public safety workers with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids
- Persons with end-stage renal disease and those receiving dialysis

#### Others:

- Travelers to areas with moderate or high rates of HBV infection
- Persons with chronic (life-long) liver disease
- Persons with HIV infection

Refugees, immigrants, and adoptees from countries where HBV infection is endemic should be screened. Adults should discuss their need or desire for hepatitis B vaccination with their healthcare providers.

For certain people at risk, postvaccination testing is recommended. Consult ACIP recommendations for details (see references).

## — Hepatitis B lab nomenclature —

**HBsAg:** *Hepatitis B surface antigen* is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.

**Anti-HBs:** Antibody to hepatitis B surface antigen is a marker of immunity. Its presence indicates an immune response to HBV infection, an immune response to vaccination, or the presence of passively acquired antibody. (It is also known as **HBsAb**, but this abbreviation is best avoided since it is often confused with abbreviations such as HBsAg.)

Anti-HBc (total): Antibody to hepatitis B core antigen is a nonspecific marker of acute, chronic, or resolved HBV infection. It is not a marker of vaccine-induced immunity. It may be used in prevaccination testing to determine previous exposure to HBV infection. (It is also known as HBcAb, but this abbreviation is best avoided since it is often confused with other abbreviations.)

**IgM** anti-HBc: *IgM* antibody subclass of anti-HBc. Positivity indicates recent infection with HBV (within the past 6 mos). Its presence indicates acute infection.

**HBeAg:** *Hepatitis B* "e" *antigen* is a marker of a high degree of HBV infectivity, and it correlates with a high level of HBV replication. It is primarily used to help determine the clinical management of patients with chronic HBV infection.

**Anti-HBe:** Antibody to hepatitis B "e" antigen may be present in an infected or immune person. In persons with chronic HBV infection, its presence suggests a low viral titer and a low degree of infectivity.

**HBV-DNA**: *HBV Deoxyribonucleic acid* is a marker of viral replication. It correlates well with infectivity. It is used to assess and monitor the treatment of patients with chronic HBV infection.

### Screening before vaccination —

Serologic testing prior to vaccination may be undertaken based on your assessment of your patient's level of risk and your or your patient's need for definitive information (see information in the left column). If you decide to test, draw the blood first, and then give the first dose of vaccine at the same office visit. Vaccination can then be continued, if needed, based on the results of the tests. If you are not sure who needs hepatitis B screening, consult your state or local health department.

Tests	Results	Interpretation	Vaccinate?
HBsAg anti-HBc anti-HBs	negative negative negative	susceptible	vaccinate if indicated
HBsAg anti-HBc anti-HBs	negative negative positive with ≥10mIU/mL	immune due to vaccination	no vaccination necessary
HBsAg anti-HBc anti-HBs	negative positive positive	immune due to natural infection	no vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive positive negative	acutely infected	no vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	positive positive negative negative	chronically infected	no vaccination necessary (may need treatment)
HBsAg anti-HBc anti-HBs	negative positive negative	four interpretations possible*	use clinical judgment

- \*1. May be recovering from acute HBV infection
- 2. May be distantly immune, but the test may not be sensitive enough to detect a very low level of anti-HBs in serum
- 3. May be susceptible with a false positive anti-HBc
- 4. May be chronically infected and have an undetectable level of HBsAg present in the serum

## Managing chronic HBV infection

When you identify a patient who is chronically infected with HBV, make sure you consult a specialist knowledgeable in the treatment of liver disease so your patient's care is optimized. Chronically infected persons need medical evaluation every 6–12 mos to assess the status of their liver health and their need for antiviral therapy, as well as to screen for liver cancer. In addition, persons with chronic HBV infection should be educated about their disease and how to protect others.

Household members and sex partners should be tested for HBV infection and given the first dose of hepatitis B vaccine at the same visit. (Vaccinating a person who has already been infected will do no harm). If testing indicates HBV susceptibility, complete the hepatitis B vaccination series. If testing indicates HBV infection, consultation and further care with a physician knowledgeable about chronic hepatitis B is needed.

#### References

- A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the U.S.: Recommendations of the ACIP, Part 1: Immunization of Infants, Children and Adolescents, MMWR, Dec. 23, 2005, Vol. 54(RR-16)
- A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the U.S.: Recommendations of the ACIP, Part II: Immunization of Adults, MMWR, Dec. 8, 2006, Vol. 55(RR-16)

www.immunize.org/catg.d/p2110.pdf • Item #P2110 (2/08)



## Recommended Dosages of Hepatitis B Vaccine and Hepatitis B Immune Globulin Using Single-Antigen Vaccine

	Engerix-B® (GlaxoSmithKline)		Recombivax HB® (Merck)		
Hepatitis B	Pediatric Formulation	Adult	Pediatric/Adolescent	Adult	
Vaccine Recipient	10mcg (0.5mL)	Formulation	Formulation	Formulation	
	(or in prefilled syringes)	20mcg (1mL)	5mcg (0.5mL)	10mcg (1mL)	
Newborns born to HBsAg	10mcg (0.5mL) <sup>1</sup> &		5mcg (0.5mL) <sup>1</sup> & (0.5mL)		
(+) mothers*	(0.5mL) HBIG		HBIG		
	within 12 hours of birth		within 12 hours of birth		
Newborns born to	10mcg (0.5mL) <sup>1</sup>		5mcg (0.5mL) <sup>1</sup>		
mothers whose HBsAg	within 12 hours of birth;		within 12 hours of birth;		
status is unknown*	(0.5mL) HBIG should also		(0.5mL) HBIG should also		
	be given within 7 days if		be given within 7 days if		
	mom's status remains		mom's status remains		
	unknown or sooner if		unknown or sooner if		
	found to be HBsAg (+)		found to be HBsAg (+)		
Newborns born to HBsAg					
(-) mothers*	10mcg (0.5mL) <sup>1</sup>		5mcg (0.5mL) <sup>1</sup>		
Birth - 19 years <sup>2</sup>	10mcg (0.5mL) <sup>1</sup>		5mcg (0.5mL) <sup>1</sup>		
11 - 15 years <sup>3</sup>				10mcg (1mL)	
$20 + years^2$		20mcg (1mL)		10mcg (1mL)	
Dialysis patients	10mcg (0.5mL)	40mcg (2mL)⁴	5mcg (0.5mL)	40mcg (1mL) <sup>5</sup>	

<sup>\*</sup>For newborns weighing less than 2000 g, see (Hepatitis B Vaccine and Hepatitis B Immune Globulin Administration for Infants)

Combination vaccines are not to be used prior to age 6 weeks, for information about the use of Comvax®, Pediarix®, and Twinrix® vaccines, see Recommended Dosages of Hepatitis B Vaccine and Hepatitis B Immune Globulin (HBIG) Including Hepatitis B Combination Vaccines.

<sup>&</sup>lt;sup>1</sup>Hepatitis B vaccine is strongly recommended at birth. This birth dose MUST be a single antigen vaccine. A 4-dose hepatitis B series is approved in conjunction with Pediarix® or Comvax®. first three doses of DTaP and IPV vaccines). A 4-dose hepatitis B series is approved with a single-antigen dose of hepatitis B vaccine at birth followed by 3 additional doses of Pediarix®.

<sup>&</sup>lt;sup>2</sup>HBIG (hepatitis B immune globulin) All susceptible contacts of an HBsAg (+) person, should receive a (0.06 mL/kg) dose of HBIG, within 7 days of a blood exposure, or within 14 days of a sexual exposure, along with the hepatitis B vaccine series.

<sup>&</sup>lt;sup>3</sup> Merck's 2-dose (adolescent) hepatitis B vaccine series (using the adult formulation of Recombivax HB® 10mcg, 1 ml) is approved only for adolescents 11-15 years of age. The second dose should be administered 4-6 months after the first dose. If the 2-dose regimen is used, documentation must indicate that the adolescent received 2 adult 10mcg (1ml) doses of the Merck brand. If a child starts the hepatitis B series prior to age 11, starts the hepatitis B series between the ages of 11 and 15 with a hepatitis B vaccine other than the adult formulation of the Merck product, or completes the series after age 15, a 3-dose series should be administered. *This specific use of vaccine is not included in the VFC program*.

<sup>&</sup>lt;sup>4</sup>Engerix-B® dialysis formulation is approved for adult hemodialysis patients by using 2 x 20mcg/1mL in one or two injections at 0, 1, 2 and 6 months.

<sup>&</sup>lt;sup>5</sup>Recombivax HB® dialysis formulation is approved for pre-dialysis and dialysis patients in a three dose series of 40mcg/1mL at 0, 1, and 6 months.



## Recommended Dosages of Hepatitis B Vaccine & Hepatitis B Immune Globulin (HBIG) Including Hepatitis B Combination Vaccines

	Single-Antigen Vaccines				Combination Vaccines			
Hepatitis B Vaccine	Engerix-Bo (GSK)	Engerix-B® Recombivax HB® (GSK) (Merck)		HB® Pediarix® (GSK)		Comvax® (Merck)	Twinrix® (GSK)	
Recipients	Pediatric Formulation	Adult Formulation	Pediatric/Adolescent Formulation	Adult Formulation	DTaP-HepB-IPV (6 wks – 7 yrs)	Hib-HepB (6 wks – 59 mos)	HepA-HepB (18 yrs & older)	
Infants born to hepatitis B surface antigen (HBsAg) positive mothers*	10mcg (0.5mL) <sup>1</sup> & (0.5mL) <sup>2</sup> HBIG within 12 hours of birth		5mcg (0.5mL) <sup>1</sup> & (0.5mL) <sup>2</sup> HBIG within 12 hours of birth					
Newborns born to HBsAg unknown mothers*	10mcg (0.5mL) <sup>1</sup> within 12 hours of birth; (0.5mL) <sup>2</sup> HBIG within 7 days if mom's status remains unknown or sooner if HBsAg-positive		5mcg (0.5mL) <sup>1</sup> within 12 hours of birth; (0.5mL) <sup>2</sup> HBIG within 7 days if mom's status remains unknown or sooner if HBsAg-positive					
Newborns born to HBsAg - negative mothers*	10mcg (0.5mL) <sup>1</sup> within 12 hours of birth or prior to hospital discharge		5mcg (0.5mL) <sup>1</sup> within 12 hours of birth or prior to hospital discharge					
Infants 6wks & older	10mcg (0.5mL)		5mcg(0.5mL)		10mcg (0.5mL) <sup>1/3</sup>	5mcg (.5mL) <sup>1/4</sup>		
Birth-19 years	10mcg (0.5mL)		5mcg(0.5mL)					
11-15 years <sup>5</sup>				10mcg (1mL) <sup>5</sup>			20 (1	
18 years & older		20(1		10			20mcg (1mL) <sup>6</sup>	
20 + years Dialysis patients	10mcg (0.5mL)	20mcg (1mL) 40mcg (2mL) <sup>7</sup>	5mcg (0.5mL)	10mcg (1mL) 40mcg (1mL) <sup>8</sup>			20mcg (1mL) <sup>6</sup>	

For specific prescribing information, precautions, contraindications, and specific dialysis formulations, refer to product inserts.

<sup>\*</sup>Newborns weighing less than 2000 grams see Hepatitis B Vaccine and Hepatitis B Immune Globulin Administration for Infants

<sup>&</sup>lt;sup>1</sup>Hepatitis B vaccine is strongly recommended at birth. This birth dose MUST be a single antigen vaccine. A 4-dose hepatitis B series is approved in conjunction with Pediarix® or Comvax®.

<sup>&</sup>lt;sup>2</sup>HBIG (hepatitis B immune globulin) All infants born to HBsAg-positive women should receive (0.5mL) HBIG within 12 hours of birth. All susceptible contacts of an HBsAg-positive person, should receive a (0.06 mL/kg) dose of HBIG, within 7 days of a blood exposure, or within 14 days of a sexual exposure, along with the hepatitis B vaccine series.

<sup>&</sup>lt;sup>3</sup>Pediarix<sup>®</sup> (DTaP, hepatitis B and IPV) - GlaxoSmithKline (GSK)'s combination vaccine used as an alternative to single antigens for administration at 2, 4 and 6 months of age. This combination vaccine is NOT to be given at birth. It may be given to any child between ages 6 weeks to 7 years of age for whom no antigen is contraindicated, and only as a primary series. (Primary series is considered first three doses of DTaP and IPV vaccines.) A 4-dose hepatitis B series is approved with a single-antigen dose of hepatitis B vaccine at birth followed by 3 additional doses of hepatitis B vaccine.

<sup>&</sup>lt;sup>4</sup>Comvax<sup>®</sup> (hepatitis B and Hib) - Merck's combination vaccine used as an alternative to single antigens for administration to any child 6 weeks to 59 months of age at 2, 4 and 12-15 months of age when neither antigen is contraindicated. This combination vaccine is NOT to be given at birth. A 4-dose hepatitis B series is approved with a single-antigen dose of hepatitis B vaccine at birth followed by 3 additional doses of hepatitis B vaccine.

<sup>&</sup>lt;sup>5</sup>Adolescent 2-dose series - Merck's 2 dose adult Recombivax HB<sup>®</sup> (10mcg, 1 ml) used only for adolescents 11-15 years of age administered at 0 and 4-6 months apart. If this 2-dose regimen is used, documentation must indicate adolescent received 2 adult (10mcg, 1ml) doses of the Merck brand. If child starts hepatitis B series prior to age 11, between the ages of 11 and 15 with a hepatitis B vaccine other than adult formulation of Merck product, or completes series after age 15, a 3-dose series should be administered. *This specific use of vaccine is not included in VFC program.* 

<sup>&</sup>lt;sup>6</sup>Twinrix<sup>®</sup> (hepatitis A and hepatitis B) – GSK's combination vaccine used as an alternative to single antigens for persons 18 years of age and older at 0, 1 & 6 months when neither antigen is contraindicated.

<sup>&</sup>lt;sup>7</sup>Engerix-B<sup>®</sup> dialysis formulation is approved for adult hemodialysis patients 20 years and older by using 2 x 20mcg/1mL at one site in one or two injections at 0, 1, 2 and 6 months.

<sup>&</sup>lt;sup>8</sup>Recombivax HB<sup>®</sup> dialysis formulation is approved for pre-dialysis and dialysis patients in a three dose series of 40mcg/1mL at 0, 1, and 6 months.



## anholm, Governor Buski, Director Hepatitis B Vaccine and Hepatitis B Immune Globulin for Infants and Contacts of Hepatitis B Surface Antigen-Positive Women

#### **Summary:**

Hepatitis B (hepB) vaccine and hepatitis B immune globulin (HBIG) are available on an as-needed basis for administration in private provider offices, hospitals, local health departments, health centers, and clinics for the care of those clients currently enrolled in the Perinatal Hepatitis B Prevention Program (PHBPP).

#### Eligibility for those currently enrolled in the PHBPP:

HepB vaccine and HBIG:

- Infants born to hepatitis B surface antigen-positive (HBsAg-positive) women HepB vaccine:
  - Susceptible household and sexual contacts of HBsAg-positive women

#### HBIG\*:

- Susceptible household and sexual contacts of HBsAg-positive women should receive HBIG within 7 days of an identifiable blood exposure.
- Susceptible sexual contacts of acutely HBsAg-positive women should receive HBIG within 14 days of a sexual exposure.

Infants born to HBsAg-positive women should receive HBIG and 3 doses of single-antigen hepB vaccine at 0, 1-2 and 6 months of age. If using hepB-containing combination vaccines, give HBIG and a single-antigen dose of hepB vaccine within 12 hours of birth and complete the series with doses at 2, 4 and 6 months of age if using Pediarix®; or with doses at 2, 4, & 12-15 months of age if using Comvax®. Post-vaccination serology should be done at 9-18 months of age (3 months after the completion of the hepB vaccine series). Susceptible household and sexual contacts of HBsAg-positive women should receive 3 doses of hepB vaccine on a schedule of 0, 1 and 4-6 months with post-vaccination serology 1-2 months after the completion of the vaccine series.

#### Private Providers, Hospitals, Health Centers, Clinics and Local Health Departments (LHD):

Whenever hepB vaccine and/or HBIG are administered to eligible infants or contacts in the PHBPP a *Hepatitis B Perinatal Case Report-Infant/Contact* should be completed and forwarded to the PHBPP Case Manager.

#### **HepB Vaccine Orders:**

All private providers, hospitals, health centers, and clinics may order hepB vaccine from their LHD. The LHD will place orders through the Michigan Department of Community Health (MDCH) Immunization Division either by faxing a request to 517-335-9855 or by e-mailing the Michigan Vaccines for Children (VFC) Program at <a href="mailto:mdchvariorder@michigan.gov">mdchvariorder@michigan.gov</a>. The VFC Program will begin transitioning to electronic ordering via the Michigan Care Improvement Registry (MCIR). The LHD and MCIR staff will help with the transition and with an ordering frequency plan to assure adequate vaccine supply for all facilities. Once all providers are transitioned to the electronic ordering, all orders for hepB vaccine will be electronically submitted to the LHD and all LHDs will electronically submit their orders directly to MDCH. All doses of hepB vaccine administered should be recorded in the MCIR and accounted for on the VFC Programs Vaccine Doses Administered Reporting Form, which should be submitted to the LHD. The LHD should also account for hepB vaccine on the Local Health Department Monthly Vaccine Inventory Report.

#### **HBIG Orders:**

Requests for HBIG should continue to be forwarded to the PHBPP.

All doses of hepB vaccine and/or HBIG given in the hospital should be entered in MCIR, via the Electronic Birth Certificate (EBC) process or direct data entry, so that all doses can be electronically recorded.

For additional information, please call the PHBPP program staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

<sup>\*</sup>Suggested intervals between immune globulin preparations and live virus vaccines are 3 months.

# VACCINES FOR CHILDREN (VFC) PROGRAM Universal Hepatitis B Vaccination Program for Newborns - Hospital Enrollment Form Year 2007/2008 (Revised 10/23/07) Page 1 of 3

VFC PIN # (Required)				
(For Local Health Department Use Only)				
COUNTY (Required)				

#### **Please Type or Print**

Physician:					
	t Name		First		M.I.
Vaccine Delivery A	ddress:				
•	Street	Suite #		City	Zip
Mailing Address:					
(if different)	Street	Suite #	(	City	Zip
Telephone: (		Fax: (	)		
Contact Name:					
Contact Name.	Last Name		First		M.I.
Medical License #:		Medicaid Prov	/ider #:		
Is your hospital a:	Federally Qualified H Rural Health Center	lealth Center (FQHC)* (RHC)*	□ Yes	□ No □ No	
	are health care clinics th	at have applied for and rece funds.	eived federal	approval to ser	rve medically

To participate in the Universal Hepatitis B Vaccination Program for Newborns and receive federally procured vaccine at no cost, I, on behalf of the hospital listed above and all the practitioners, nurses, and others associated with this health delivery facility, agree to do the following:

- 1. Administer VFC vaccines only to newborns in accordance with the immunization schedule, dosages and contraindications established by the Advisory Committee on Immunization Practices (ACIP) and the VFC resolutions issued by the ACIP. Any exceptions to these guidelines practice must be based on: a) the attending physician's medical judgment, in accordance with accepted medical practice; or b) a reasonable belief that a specific requirement contradicts the law in my state pertaining to religious or other exemptions.
- 2. Maintain medical records pertaining to the Universal Hepatitis B Vaccination Program for Newborns for a period of at least 3 years. If requested, the hospital named above will make such records available to the local health department, the state or the Department of Health and Human Services (DHHS).
- 3. Provide eligibility information in each child's medical record (see Section II Page 6 for more details).
- 4. Provide a current Vaccine Information Statement (VIS) that includes the Michigan Care Improvement Registry (MCIR) statement and maintain records in accordance with the *National Childhood Vaccine Injury Act (NCVIA)*, which includes reporting clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS).
- 5. Not impose a charge for the cost of the vaccine.

## VACCINES FOR CHILDREN (VFC) PROGRAM Universal Hepatitis B Vaccination Program for Newborns - Hospital Enrollment Form Year 2007/2008 Page 2 of 3

- 6. Not impose a charge for the administration of the vaccine that is higher than the maximum fee of \$16.75 per injection as established by DHHS.
- 7. Report hepatitis B immunizations of any newborn immunized at the hospital directly to the Michigan Care Improvement Registry (MCIR) via the electronic birth certificate (EBC) worksheet.
- 8. Use the state's *Official Certificate of Immunization* (green immunization record card) or a printed record from the MCIR to record doses of vaccine administered for the patient's personal record.
- 9. Not deny administration of a federally procured vaccine to a child because the child's parent, guardian, or individual of record is unable to pay the administration fee.
- 10. Comply with state and local health department requirements for ordering vaccine and vaccine accountability. Agree to operate within the VFC Program in a manner intended to avoid fraud and abuse. Use of the MCIR will be required with Centralized Distribution.
- 11. Comply with the Centers for Disease Control and Prevention's (CDC) Recommendations for Handling and Storage of Vaccines. In the event that vaccines obtained through the program are wasted due to expiration, negligence and/or improper vaccine storage and handling practices, the hospital will reimburse the Michigan Department of Community Health (MDCH) for the replacement cost of vaccines wasted.
- 12. Allow the local health department to conduct a CDC-based VFC site visit, including access to 30 patient charts for a review of immunization documentation and eligibility screening. Agree to work with the local health department to implement any corrective actions as a result of the site visit.
- 13. Follow appropriate vaccine management procedures such as submitting regular doses administered reports to the local health department, using certified thermometers and maintaining appropriate temperatures in refrigerators and freezers where vaccine is stored, monitoring refrigerator and freezer temperatures twice daily in units where vaccine is stored, and notifying the local health department when state-supplied vaccine has wasted or will expire within three months.
- 14. Document according to *Statute 42 US Code 300aa-25* and CDC requirements (see Section II, page 22).

The hospital may terminate this agreement at any time. The State may terminate this agreement at any time if I fail to comply with these requirements. Upon termination, the hospital agrees to properly return all publicly provided vaccines to the local health department.

Physician (Please print or type Physician's name)	Title (MD, DO)
Physician's signature	 Date

September 1, 2007 Section II - Page 14 Resource Book For VFC Providers

## VACCINES FOR CHILDREN (VFC) PROGRAM Universal Hepatitis B Vaccination Program for Newborns - Hospital Enrollment Form Year 2007/2008 Page 3 of 3

Monday

Tuesday

Thursday

Friday

Wednesday

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This document provides shipping information and is used to develop annual population estimates that are submitted to the Centers for Disease Control and Prevention (CDC) and used by CDC to determine Michigan's annual allocation of federal funds. The form is also used to compare estimated vaccine needs with actual vaccine supply.

Profile Table: The following information must be based on data rather than estimates and should reflect the number of children expected to be born in a year. Please document the data source.

Eligibility Criteria	Births
Enrolled in Medicaid	
Uninsured	
American Indian/Alaskan Native	
Underinsured/Fully insured/Private Pay (includes MI-Child)	
ANNUAL TOTALS	
Provider Encounter Data Tally Shee	Claims Data et ministered Data
Clinic/Site Delivery Hours:	

PM Closed for lunch from: \_\_\_\_\_\_PM Closed for lunch from: \_\_\_\_\_

PM Closed for lunch from: \_\_\_\_\_

PM Closed for lunch from:

PM Closed for lunch from: \_\_\_\_\_

## HEPATITIS B VACCINE

## WHAT YOU NEED TO KNOW

## **│** What is hepatitis B?

Hepatitis B is a serious disease that affects the liver. It is caused by the hepatitis B virus (HBV). HBV can cause:

Acute (short-term) illness. This can lead to:

- loss of appetite
- diarrhea and vomiting
- tiredness
- jaundice (yellow skin or eyes)
- pain in muscles, joints, and stomach

Acute illness is more common among adults. Children who become infected usually do not have acute illness.

Chronic (long-term) infection. Some people go on to develop chronic HBV infection. This can be very serious, and often leads to:

•liver damage (cirrhosis) •liver cancer •death

Chronic infection is more common among infants and children than among adults. People who are infected can spread HBV to others, even if they don't appear sick.

- In 2005, about 51,000 people became infected with hepatitis B.
- About 1.25 million people in the United States have chronic HBV infection.
- Each year about 3,000 to 5,000 people die from cirrhosis or liver cancer caused by HBV.

Hepatitis B virus is spread through contact with the blood or other body fluids of an infected person. A person can become infected by:

- contact with a mother's blood and body fluids at the time of birth;
- contact with blood and body fluids through breaks in the skin such as bites, cuts, or sores;
- contact with objects that could have blood or body fluids on them such as toothbrushes or razors;
- having unprotected sex with an infected person;
- sharing needles when injecting drugs;
- being stuck with a used needle on the job.

## 2 Hepatitis B vaccine: Why get vaccinated?

Hepatitis B vaccine can prevent hepatitis B, and the serious consequences of HBV infection, including liver cancer and cirrhosis.

Routine hepatitis B vaccination of U.S. children began in 1991. Since then, the reported incidence of acute hepatitis B among children and adolescents has dropped by more than 95% – and by 75% in all age groups.

Hepatitis B vaccine is made from a part of the hepatitis B virus. It cannot cause HBV infection.

Hepatitis B vaccine is usually given as a series of 3 or 4 shots. This vaccine series gives long-term protection from HBV infection, possibly lifelong.

## Who should get hepatitis B vaccine and when?

#### **Children and Adolescents**

- All children should get their first dose of hepatitis B vaccine at birth and should have completed the vaccine series by 6-18 months of age.
- Children and adolescents through 18 years of age who did not get the vaccine when they were younger should also be vaccinated.

#### Adults

- All unvaccinated adults at risk for HBV infection should be vaccinated. This includes:
  - sex partners of people infected with HBV,
  - men who have sex with men,
  - people who inject street drugs,
  - people with more than one sex partner,
  - people with chronic liver or kidney disease,
  - people with jobs that expose them to human blood,
  - household contacts of people infected with HBV,
  - residents and staff in institutions for the developmentally disabled,
  - kidney dialysis patients,

- people who travel to countries where hepatitis B is common,
- people with HIV infection.
- Anyone else who wants to be protected from HBV infection may be vaccinated.

## 4 Who should NOT get hepatitis B vaccine?

- Anyone with a life-threatening allergy to baker's yeast, or to any other component of the vaccine, should not get hepatitis B vaccine. Tell your provider if you have any severe allergies.
- Anyone who has had a life-threatening allergic reaction to a **previous dose of hepatitis B vaccine** should not get another dose.
- Anyone who is moderately or severely ill when a
  dose of vaccine is scheduled should probably wait
  until they recover before getting the vaccine.

Your provider can give you more information about these precautions.

Pregnant women who need protection from HBV infection may be vaccinated.

## 5 | Hepatitis B vaccine risks

Hepatitis B is a very safe vaccine. Most people do not have any problems with it.

The following mild problems have been reported:

- Soreness where the shot was given (up to about 1 person in 4).
- Temperature of 99.9°F or higher (up to about 1 person in 15).

Severe problems are extremely rare. Severe allergic reactions are believed to occur about once in 1.1 million doses.

A vaccine, like any medicine, could cause a serious reaction. But the risk of a vaccine causing serious harm, or death, is extremely small. More than 100 million people have gotten hepatitis B vaccine in the United States.

## What if there is a moderate or severe reaction?

#### What should I look for?

 Any unusual condition, such as a high fever or behavior changes. Signs of a serious allergic DCH-0450 reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

#### What should I do?

- Call a doctor, or get the person to a doctor right away.
- Tell your doctor what happened, the date and time it happened, and when the vaccination was given.
- Ask your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form.

Or you can file this report through the VAERS web site at www.vaers.hhs.gov, or by calling 1-800-822-7967.

VAERS does not provide medical advice.

## The National Vaccine Injury Compensation Program

In the event that you or your child has a serious reaction to a vaccine, a federal program has been created to help pay for the care of those who have been harmed.

For details about the National Vaccine Injury Compensation Program, call 1-800-338-2382 or visit their website at www.hrsa.gov/vaccinecompensation.

### 8 | How can I learn more?

- Ask your doctor or nurse. They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department. 1-888-767-4687
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call 1-800-232-4636 (1-800-CDC-INFO)
  - Visit CDC websites at: www.cdc.gov/ncidod/diseases/hepatitis www.cdc.gov/vaccines www.cdc.gov/travel





DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

Vaccine Information Statement (Interim)
Hepatitis B (7/18/07)
42 U.S.C. § 300aa-26

AUTH: P.H.S., Act 42, Sect. 2126.

To allow medical care provider(s) accurate immunization status information, an immunization assessment, and a recommended schedule for future immunizations, information will be sent to the Michigan Care Improvement Registry. Individuals have the right to request that their medical care provider not forward immunization information to the Registry.

## Important Vaccine Information Statement (VIS) Facts

## VIS now posted on MDCH website

The English language Vaccine Information Statements (VIS) are now posted on our website. We are also in the process of posting the foreign language VIS.

In Michigan, it is important that vaccine recipients, their parents, or their legal representatives be given the Michigan version of the VIS because they include information about the Michigan Care Improvement Registry (MCIR). By state law, parents must be informed about MCIR. Vaccine Information Statements that are obtained from other sources (e.g., from the CDC or IAC websites) do not contain information about MCIR.

www.michigan.gov/immunize

## Foreign Languages

The VIS are available in 36 foreign languages. They include information about MCIR. When the foreign language VIS is not the most current version, parents should also be given the current English version. To receive the VIS in a foreign language, call the MDCH Division of Immunization at 517-335-8159.

We are currently in the process of posting the foreign language VIS on the MDCH website. The foreign language VIS will be posted at www.michigan.gov/immunize.

## VIS documentation procedures

By noting the version date of the VIS on the patient's vaccine administration record, the provider is indicating that the parent and/or patient received the most current information about the vaccine. To document this, the provider must note in the patient's medical record the date the VIS was given and the version date of the VIS.

VIS Version Dates (3/13/08)					
VIS	Current Version Date	New Version Dates			
Multiple Vaccines (new)	1-30-08				
HPV	Interim 2-2-07				
Нер В	Interim 7-18-07				
DTaP	5-17-07				
Td	6-10-94				
Tdap	Interim 7-12-06				
Hib	12-16-98				
IPV	1-1-00				
MMR (updated)	Interim 3-13-08				
VAR (updated)	Interim 3-13-08				
PCV	9-30-02				
PPV23	7-29-97				
Нер А	3-21-06				
TIV (Flu)	Updated annually	7-16-07			
LAIV (Flu)	Updated annually	10-4-07			
Meningococcal* (MCV4 & MPSV4)	Interim 1-28-08				
Rota (Rotavirus)	Interim 4-12-06				
Zoster (Shingles)	Interim 9-11-06				
Japanese Encephalitis	5-11-05				
Rabies	1-12-06				
Typhoid	5-19-04				
Yellow Fever	11-09-04				

## VIS are available in 36 foreign languages

Albanian	Croatian (Serbian)	Japanese	Samoan
Amheric (Ethiopia)	Farsi	Korean	Serbo-Croatian
Arabic	French	Laotian	Somali
Armenian	German	Marshallese	Spanish
Bengali	Haitian Creole	Polish	Tagalog
Bosnian	Hindi	Portuguese	Thai
Burmese	Hmong	Punjabi	Turkish
Cambodian	Ilokano	Romanian	Urdu
Chinese	Italian	Russian	Vietnamese

## After receiving vaccines...



You have received one or more immunizations today: (circled)

Influenza – Injectable
Influenza – Nasal
Pneumococcal
Tetanus/Diphtheria
Tetanus/Diphtheria/Pertussis
Human Papillomavirus
Hepatitis A
Hepatitis B
Measles/Mumps/Rubella
Varicella (chickenpox)
Meningococcal
Zoster (shingles)

Sometimes the immunizations that protect you from serious diseases may also cause some discomfort. Reactions to vaccinations do occur, but serious reactions are rare. The more common reactions are redness, slight swelling and pain at the injection site and fever.

- If your arm becomes sore, you may want to apply ice or a cold pack to the injection area for 5–10 minutes at a time.
- Using or exercising the arm where the injection was given will distribute the medication quickly and decrease soreness.
- If you develop a fever greater than 100°F (38°C)
  - Please take a fever reducing medication as directed:
     for the next 24 hours.
  - o Drink plenty of fluids.
  - o Dress lightly.

If you have other questions or are concerned about how you are feeling, CALL the clinic!

The Clinic Phone Number is	
Your next vaccine(s) are due on or after _	



## **Injectable Vaccine Administration for Adults\***

Janet Olszewski, Director			1	1	
Vaccine	Age/Reminders	Route	Site	Needle Size	Contraindications <sup>†</sup>
Tetanus/Diphtheria (Td)	7 years & older	IM	Deltoid	1" – 1.5"	Anaphylactic reaction to prior dose or component; For Tdap: encephalopathy within 7 days of previous pertussis
Td with pertussis (Tdap)	11-64 yrs (Adacel®) 10-18 yrs (Boostrix®)			22-25g	vaccine dose without other known cause
Hepatitis B (hep B)	3-dose series; no booster recommended	IM	Deltoid	1" – 1.5" 22-25g	Anaphylactic reaction to prior dose or component (baker's yeast)
Hepatitis A (hep A)	2-dose series; 2 <sup>nd</sup> dose 6 mo after 1st	IM	Deltoid	1" – 1.5" 22-25g	Anaphylactic reaction to prior dose or component; hypersensitivity to alum (Havrix® only: 2-phenoxyethanol)
Measles/Mumps/Rubella (MMR)	Born 1957 or late, assure 1 dose given; 2 doses for high risk	SC	Lateral Upper Arm	5/8" 23-25g	Anaphylactic reaction to prior dose or component (neomycin, gelatin); pregnancy
Varicella (Var)	Born 1980 or later, assure 2 doses or evidence of immunity	SC	Lateral Upper Arm	5/8" 23-25g	Anaphylactic reaction to prior dose or component (neomycin, gelatin); pregnancy
Inactivated Influenza (TIV)	Given yearly (thru March/April)	IM	Deltoid	1" – 1.5" 22-25g	Anaphylactic reaction to prior dose or component (eggs)
Pneumococcal	No more than 2 lifetime doses	SC	Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to prior dose or
Polysaccharide (PPV 23)	Space at least 5 years apart	IM	Deltoid	1"– 1.5" 22-25g	component
Meningococcal Conjugate (MCV4)	All adol 11-18 yrs; persons 19-55 yrs with risk factor	IM	Deltoid	1" – 1.5" 22-25g	Anaphylactic reaction to prior dose or component; history of GBS (use MPSV4)
Human Papillomavirus (HPV4)	Females age 9 thru 26; 3-dose series	IM	Deltoid	1" – 1.5" 22-25g	Anaphylactic reaction to prior dose or component; hypersensitivity baker's yeast
Herpes Zoster (zoster)	Adults 60 years and older	SC	Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to prior dose or component (neomycin, gelatin); pregnancy

<sup>\*</sup> Routinely screen for and administer these vaccines as needed. See Adult Immunization Schedule for additional information on risk groups, dosing and minimum intervals. For travel and select-group vaccine information (IPV, yellow fever, rabies, etc.), refer to www.cdc.gov/vaccines

<sup>†</sup> Vaccines should never be administered in the buttocks. See package insert for complete contraindication/component listing; components may vary by brand of vaccine Alliance for Immunization in Michigan, 2008 AIM Kit—Adult Immunization Section

Rev. December 12, 2007

## **Vaccine Administration Record for Adults**

Patient Name:	
Date of Birth:	
MCIR ID#	

Clinic	NI	-/-	al al a	_
Calinic	Nam	$\mathbf{e}_{l}\mathbf{\Delta}_{l}$	nnre	•

## Guide to using this form

Vaccine	Date Vaccine  & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site Given <sup>2</sup>	Route <sup>3</sup>	Signature of Vaccine Administrator	Client Status
Tetanus, diphtheria	01/12/89*	Td							
diphtheria Td with acellular	04/25/99*	Td		[ * ] Ind	dicates vaccine				
pertussis	07/06/06*				elsewhere				
Types are:	, ,	Tdap							
Tdap									
Hepatitis B	10/2/02	НерВ-НерА	7/11/01	GSK	НАВ239А4	RA	IМ	Sally Smith RN	${\cal P}$
Types are: HepB	11/12/02	НерВ-НерА	7/11/01	GSK	НАВ239А4	RA	IМ	Sally Smith RN	Р
HepB-HepA	08/04/03	НерВ-НерА	7/11/01	GSK	НАВ239А4	RA	IМ	Jane Doe, MA	${\cal P}$
Measles, Mumps, Rubella	10/2/02	MMR	06/13/02	MRK	М23456а	LA	SC	Sally Smith RN	${\cal P}$
Type is: MMR	11/12/02	MMR	06/13/02	MRK	M23456a	LA	SC	Sally Smith RN	${\mathscr P}$
Varicella	History	12/03/89						, ,	
Type is: Var	of disease								
Influenza	11/12/03	TIV D	ocuments v	aricolla	VO88211	RA	IМ	Sally Smith RN	P
Types are:	, ,		sease histo						
TIV (Injectable)			<u> </u>	T					
LAIV (Nasal) (See Back for Additional Spaces)						Same shot (hep A-hep B) 2 different "Date on VIS"			
, ,									
Pneumococcal									
Type is: PPV23									
	10/2/02	НерВ-НерА	8/25/98	GSK	НАВ239А4	o a	IM	Calle Comitte DOS	$\mathcal{P}$
Hepatitis A Types are: HepA	10/2/02	НерВ-НерА	8/25/98	GSK,	НАВ239А4 НАВ239А4	RA	IM IM	Sally Smith RN	$\mathcal{P}$
Hepatitis A Types are: HepA HepB-HepA	11/12/02	НерВ-НерА	8/25/98	GSK	НАВ239А4	RA	IМ	Sally Smith RN	
Types are: HepA				, v	, ,				$\mathcal{P}$
Types are: HepA HepB-HepA Meningococcal Types are: MCV4	11/12/02	НерВ-НерА	8/25/98	GSK	НАВ239А4	RA	IМ	Sally Smith RN	$\mathcal{P}$
Types are: HepA HepB-HepA Meningococcal	11/12/02	НерВ-НерА	8/25/98	GSK GSK	НАВ239А4	RA RA	IM IM	Sally Smith RN  Jane Doe MA	P
Types are: HepA HepB-HepA  Meningococcal Types are: MCV4 MPSV4	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to	НАВ239А4 НАВ239А4	RA RA e adminis	IM IM tration	Sally Smith RN  Jane Doe MA  record for:	P
Types are: HepA HepB-HepA Meningococcal Types are: MCV4	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to	НАВ239А4  HAB239А4  complete the le vaccines (t	RA RA e adminis	IM IM tration	Sally Smith RN  Jane Doe MA  record for:	P
Types are: HepA HepB-HepA  Meningococcal Types are: MCV4 MPSV4  Human Papillomavirus Type: HPV4	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to - Sing - Con - Vac	HAB239A4  HAB239A4  complete the legical vaccines (to bination vaccines that are	RA RA e adminischose with cines (thought given els	tration h one \ ese with	Sally Smith RN  Jane Doe MA  record for: /IS) n more than one	P
Types are: HepA HepB-HepA  Meningococcal Types are: MCV4 MPSV4  Human Papillomavirus Type: HPV4  Zoster	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to - Sing - Con - Vac	НЯВ239Я4  HЯВ239Я4  complete the light of t	RA RA e adminischose with cines (thought given els	tration h one \ ese with	Sally Smith RN  Jane Doe MA  record for: /IS) n more than one	P
Types are: HepA HepB-HepA  Meningococcal Types are: MCV4 MPSV4  Human Papillomavirus Type: HPV4  Zoster Type; Zoster	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to - Sing - Con - Vac	HAB239A4  HAB239A4  complete the legical vaccines (to bination vaccines that are	RA RA e adminischose with cines (thought given els	tration h one \ ese with	Sally Smith RN  Jane Doe MA  record for: /IS) n more than one	P
Types are: HepA HepB-HepA  Meningococcal Types are: MCV4 MPSV4  Human Papillomavirus Type: HPV4  Zoster Type; Zoster  Other	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to - Sing - Con - Vac	HAB239A4  HAB239A4  complete the legical vaccines (to bination vaccines that are	RA RA e adminischose with cines (thought given els	tration h one \ ese with	Sally Smith RN  Jane Doe MA  record for: /IS) n more than one	P
Types are: HepA HepB-HepA  Meningococcal Types are: MCV4 MPSV4  Human Papillomavirus Type: HPV4  Zoster Type; Zoster	11/12/02	НерВ-НерА	8/25/98	GSK GSK How to - Sing - Con - Vac	HAB239A4  HAB239A4  complete the legical vaccines (to bination vaccines that are	RA RA e adminischose with cines (thought given els	tration h one \ ese with	Sally Smith RN  Jane Doe MA  record for: /IS) n more than one	P

Place an asterisk (\*) next to the date the vaccine was given to indicate vaccines administered elsewhere

<sup>&</sup>lt;sup>2</sup> Site Code: LA=LT ARM, RA=RT ARM, LL=LT LEG, RL=RT LEG, and Nasal

Route Code: IM=intramuscular, SC=subcutaneous, and intranasal

<sup>&</sup>lt;sup>4</sup> Client VFC Status: M=Medicaid, U=Uninsured, D=Underinsured, A=American Indian or Alaskan Native, P=Private Insurance,

Vaccine Administration Record for Adults	
Patient Name:	Clinic Name/Address
Date of Birth:	
MCIR ID #	

Vaccine	Date Vaccine & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site Given <sup>2</sup>	Route <sup>3</sup>	Signature of Vaccine Administrator	Client Status
Tetanus, diphtheria Td with acellular pertussis Types are: Td Tdap									
Hepatitis B Types are: HepB HepA/HepB									
Measles, Mumps, Rubella Type is: MMR									
Varicella Type is: Var									
Influenza Types are: TIV (Injectable) LAIV (Nasal) (See Back for Additional Spaces)									
Pneumococcal Type is: PPV23									
Hepatitis A Types are: HepA HepA/HepB									
Meningococcal Types are: MCV4 MPSV4									
Human Papillomavirus Type: HPV4									
Zoster Type; Zoster Other									
Other Other Other									

Place an asterisk (\*) next to the date the vaccine was given to indicate vaccines administered elsewhere
 Site Code: LA=LT ARM, RA=RT ARM, LL=LT LEG, RL=RT LEG, and Nasal
 Route Code: IM=intramuscular, SC=subcutaneous, and intranasal
 Client VFC Status: M=Medicaid, U=Uninsured, D=Underinsured, A=American Indian or Alaskan Native, P=Private Insurance,

Vaccine	Date Vaccine & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site Given <sup>2</sup>	Route <sup>3</sup>	Signature of Vaccine Administrator	Client Status <sup>4</sup>
Influenza									
Types are: TIV (Injectable) LAIV (Nasal)									
Notes:									

#### Note:

Patients/parents should be informed about the risks and benefits associated with immunizations including those associated with the vaccine-preventable disease. Federal and state guidelines do not require a patient/parent signature to administer vaccines. However, health care providers have the option to obtain a signature. Check with your agency for specific requirements.

I have been given a copy and have read, or have had explained to me, the information contained on the appropriate Vaccine Information Statement (VIS) about the disease(s) and the vaccine(s) which are to be administered today. I have had a chance to ask questions that were answered to my satisfaction. I understand the benefits and risks of the specific vaccine(s) and I ask that the vaccine(s) I have requested be given to me, or to the person named, for whom I am authorized to make this request.

1. SIGNATURE	DATE	Insurance Status	6. SIGNATURE	DATE	Insurance Status
2. SIGNATURE	DATE	Insurance Status	7. SIGNATURE	DATE	Insurance Status
3. SIGNATURE	DATE	Insurance Status	8. SIGNATURE	DATE	Insurance Status
4. SIGNATURE	DATE	Insurance Status	9. SIGNATURE	DATE	Insurance Status
5. SIGNATURE	DATE	Insurance Status	10. SIGNATURE	DATE	Insurance Status



**Injectable Vaccine Administration for Children Birth-6 years** 

Vaccine	Age/Reminders	Route	Site ¤	Needle*	Contraindications ⊕
Diphtheria, Tetanus, Pertussis (DTaP)	6 weeks-6 years	IM	Anterolateral Thigh or Deltoid <sup>±</sup>	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component; encephalopathy without other cause within 7 days of a pertussiscontaining vaccine
Haemophilus influenza type B (Hib)	No routine doses after 59 months	IM	Anterolateral Thigh or Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component
Pneumococcal conjugate (PCV7)	No routine doses after 59 months	IM	Anterolateral Thigh <b>or</b> Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component
Hepatitis B (Hep B)	1 <sup>st</sup> dose at birth; last dose at/after 6 months	IM	Anterolateral Thigh <b>or</b> Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to a prior dose or component (baker's yeast)
Inactivated Polio	For school entry: 1 <sup>st</sup> dose at/after 6 wks of age; all	SC	Anterolateral Thigh <b>or</b> Lateral Upper Arm	5/8" 23- 25 g	Anaphylactic reaction to a prior dose or component (neomycin, streptomycin,
Vaccine (IPV)	doses spaced at least 4 weeks apart	IM	Anterolateral Thigh <b>or</b> Deltoid	1"-1.5 22- 25 g	polymyxin B)
Measles, Mumps, Rubella (MMR)	1 <sup>st</sup> dose at/after 12 mo; 4 week interval between two doses (all ages)	SC	Anterolateral Thigh <b>or</b> Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to a prior dose or component (neomycin or gelatin); pregnancy
Varicella (Var)	1 <sup>st</sup> dose at/after 12 mo; 3 mo interval between doses (ages 12 mo-12 yrs)	SC	Anterolateral Thigh <b>or</b> Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to a prior dose or component (neomycin or gelatin); pregnancy
Inactivated Influenza (TIV)	6 months and older; brand to use based on age	IM	Anterolateral Thigh <b>or</b> Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to a prior dose or component (eggs)
Hepatitis A (Hep A)	1 <sup>st</sup> dose at/after 12 mo 2 <sup>nd</sup> dose 6 mo later	IM	Anterolateral Thigh <b>or</b> Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component; hypersensitivity to alum (Havrix®: 2-phenoxyethanol)

<sup>□</sup> Vaccines should never be administered in the buttocks. ⊕ See package insert for complete contraindication/component listing; may vary by brand \* Professional judgment is appropriate when selecting needle length for use in all children, especially small infants or larger children.

<sup>±</sup> Use of the deltoid muscle in children 18 months and older (if adequate muscle mass is present) is an option for IM injections. December 11, 2007

**Injectable Vaccine Administration for Children 7-18 Years** 

Vaccine	Age/Reminders	Route	Site*	Needle*	Contraindications ⊕
Tetanus, diphtheria (Td)	7 years and older	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component
Tetanus, diphtheria, pertussis (Tdap)	Routinely given at age 11-12 years; one dose ■	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component; encephalopathy within 7 days of previous pertussis vaccine without other known cause
Hepatitis B (hep B)	1 <sup>st</sup> dose at birth; last dose at/after 6 mo	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to a prior dose or component (baker's yeast)
Inactivated Polio	For school entry: 1 <sup>st</sup> dose at/after 6 wks of age; all doses	SC	Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to a prior dose or component (neomycin, streptomycin, or
Vaccine (IPV)	spaced at least 4 weeks apart	IM	Deltoid	1"-1.5" 22-25 g	polymyxin B)
Measles, Mumps, Rubella (MMR)	1 <sup>st</sup> dose at/after12 mo	SC	Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to a prior dose or component (neomycin, gelatin); pregnancy
Varicella (Var)	1 <sup>st</sup> dose at/after 12 mo 12mo-12 yr: 3 months between dose 1 & 2	SC	Lateral Upper Arm	5/8" 23-25 g	Anaphylactic reaction to a prior dose or component (neomycin, gelatin); pregnancy
Inactivated Influenza (TIV)	Assure vaccine brand being used is age-appropriate	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to a prior dose or component (eggs)
Meningococcal Conjugate (MCV4)	Routinely given at age 11-12 yrs; catch-up all adolescents 13-18	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to a prior dose or component; history of GBS
Human Papilloma- virus (HPV4)	Females 9 through 26 years	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component; hypersensitivity to baker's yeast
Hepatitis A (hep A)	1 <sup>st</sup> dose at/after 12 mo 2 <sup>nd</sup> dose 6 mo later	IM	Deltoid	1"-1.5" 22-25 g	Anaphylactic reaction to prior dose or component; hypersensitivity to alum (Havrix®: 2-phenoxyethanol)



<sup>\*</sup> Professional judgment is appropriate when selecting needle length and administration site; do not administer vaccines in buttocks

 $<sup>\\ \</sup>oplus \ \text{See package insert for complete contraindication listing; components may vary by brand of vaccine used}$ 

<sup>■</sup> Two Tdap vaccines available: Boostrix® (GSK) is licensed for persons 10-18 yrs; ADACEL™ (sanofi pasteur) licensed for persons 11-64 yrs.

### Vaccine Administration Record for Children and Teens

 Patient Name:
 Any Child

 Date of Birth:
 11/30/2002

Clinic Name/Address

## Guide for using this form...

MCIR ID#

MCIR ID#									
Vaccine	Date Vaccine & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site Given <sup>2</sup>	Route <sup>3</sup>	Signature of Vaccine Administrator	Client VFC Status
	02/05/03	DTap-HepB-IPV	7/30/01	GSK	635A	RT	IМ	Sally Woods MA	М
Piphtheria, etanus, Pertussis	04/05/03	DТар-НерВ-IPV	7/30/01	ŞŞK	712A2	RT	IМ	Sally Woods MA	М
ypes are: TaP	06/05/03	DTap-HepB-IPV	7/30/01	GSK	712A2	RT	IМ	Sally Woods MA	М
Types are: DTaP DTaP-Hib DTaP-HepB-IPV Idap Haemophilus		Indicates v elsewhere.	accine g	iven	Same sh Stateme	111111111111111111111111111111111111111		Vaccine Informat on dates	ion
influenzae type b	02/05/03	Нів	12/16/98	AVP	UA7449A	LT	IМ	Sally Woods MA	М
Types are:	04/05/03	Hi6	12/16/98	AVP	UB/44AA	LT	IM	Sally Woods MA	М
∃ib ∃ib-HepB ⊃TaP-Hib	06/05/03	Нів	12/16/98	AVp	VA744AA	LT	IМ	Sally Woods MA	М
Hepatitis B	12/02/02*	Нер В				Given	at	Anywhere Hospital	
Types are:	02/05/03	DTap-HepB-IPV	7/11/01	GSK	6 <b>3</b> 5A2	RT	IM	Sally Woods MA	М
HepB Hib-HepB	04/05/03	DTap-HepB-IPV	7/11/01	GSK	712A2	RT	IМ	Sally Woods MA	М
DTaP-HepB-IPV	06/05/03	DTap-HepB-IPV	7/11/01	GSK /	712A2	RT	IМ	Sally Woods MA	м
<b>Hepatitis A</b> Type is: HepA				/					
	00/07/00	of as a real	1/01/00	logar.	C25.40		704	Sally Woods MA	М
Polio	02/05/03	DTap-HepB-IPV	1/01/00	GSK	635A2	RT RT	IM IM	Sally Woods MA	$\mathcal{M}$
Types are: IPV	04/05/03 06/05/03	DTap-HepB-IPV  DTap-HepB-IPV	1/01/00 1/01/00	GSK.	712A2 712A2	RT	IM	Sally Woods MA	M
DTaP-HepB-IPV	00/03/03	101up-91epp-14 V	1/01/00	931\.	112,72	12(2	1511	July Woods Styl	3/2
Measles, Mumps, Rubella Types are : MMR MMRV	12/20/03	MMR,	1/15/03	MRK	0857M	L,A	SC	Linda Miller MA	М
Varicella	Disease date								
Types are: Var MMRV	11/15/03	*	Досиг	ments d	isease history				
	02/05/03	PCV 7	7,30,02		1407°033	RT	IМ	Sally Woods MA	М
Pneumococcal conjugate	04/05/03	PCV 7	9/30/02	WYE	489-835	RT	IМ	Sally Woods MA	М
	06/05/03	PCV 7	9/30/02	WYE	489-835	RT	IМ	Sally Woods MA	М
Type is: PCV7	03/05/04	PCV 7	9/30/02	WYE	501-245	LT	IМ	Sally Woods MA	М
Rotavirus Type is: Rota									
Influenza Types are: TIV (Injectable) LAIV (Intranasal) (More space on the reverse side.) Meningococcal					— Single Vacci	nes		ation record for:	
Types are: MCV4 MPSV4					Vaccines that     History of C	it are gi	ven else	where and	
Human Papillomavirus Type is: HPV4									

<sup>&</sup>lt;sup>1</sup> Place an asterisk (\*) next to the date the vaccine was given to indicate vaccines administered elsewhere.

<sup>2</sup> Site Code: LA=LT ARM, RA=RT ARM, LL=LT LEG, RL=RT LEG

<sup>3</sup> Route Code: IM= intramuscular, SC=subcutaneous, IN=intranasal, PO=oral

<sup>4</sup> Client Status: M=Medicaid, U=Uninsured, D=Underinsured, P=Private Insurance, A=American Indian or Alaskan Native, V=MIVRP, L=Other Public Purchase

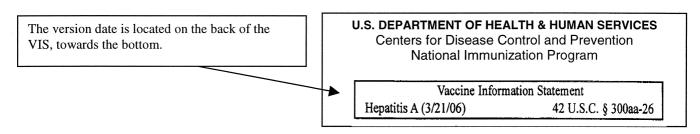
## Documenting Immunizations- What You Need To Know

The National Childhood Vaccine Injury Act (NCVIA) <u>requires</u> all health care providers in the United States who administer any vaccine containing diphtheria, tetanus, pertussis, measles, mumps, rubella, polio, hepatitis B, Hib, pneumococcal conjugate, influenza, rotavirus and varicella antigen to document the information detailed below:

Patient Nar Date of Birt	ne h	on Record For			Clinic Na	me/Addre	ss		
	1		2	3	3			4	
Vaccine	Date 1 Vaccine & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site <sup>2</sup> Given	Route <sup>3</sup>	Signature of Vaccine Administrator	Client VFC Status <sup>4</sup>
Diphtheria, Tetanus, Pertussis Types are: DTaP DT DTaP-Hib DTaP-HepB-IPV Td Tdap									

1		The date the vaccine is administered and the date the Vaccine Information Statement (VIS) was given must be charted.
	7	Combination vaccines should be recorded under EACH of the antigens in the vaccine. If the vaccine was administered
		elsewhere, add an asterisk after the administration date.

Federal law requires the health care provider to provide a copy of the most <u>current</u> version of the appropriate Vaccine Information Statement (VIS). VIS are updated when there are changes in the information. By noting the version date of the VIS in the patient's medical record, the provider is indicating that the patient or parent has received the most current information about the vaccine. For combination vaccines (except MMR and DTaP), a VIS for each antigen in the vaccine must be provided and documented. In Michigan, it is important to use VIS that includes information about the Michigan Care Improvement Registry (MCIR). These VIS are available free from your local health department or at www.michigan.gov/immunize



Vaccines not administered due to true contraindications, supply, or parental refusal should be noted. A sample *Refusal to Consent to Vaccinations* form may be found in this section of the AIM Kit.

The lot number of the vaccine used and the manufacturer name must be documented for each immunization administered. This information will be needed in the case of an adverse event or vaccine recall.

The name and title of the person who administered the vaccine must be charted. The clinic name and address should also be documented on the record.

Vaccine Administration Record for Children and Teens	Clinic Name/Address
Patient Name:	
Date of Birth:	
MCIR ID#	

MCIR ID#									
Vaccine	Date Vaccine & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site Given <sup>2</sup>	Route <sup>3</sup>	Signature of Vaccine Administrator	Client VFC Status <sup>4</sup>
Diphtheria, Tetanus, Pertussis Types are: DTaP									
Types are: DTaP DTaP-Hib DTaP-HepB-IPV Idap Td									
†ď									
Haemophilus influenzae type b									
Types are: Hib									
Hib-HepB DTaP-Hib									
Hepatitis B									
Types are: HepB Hib-HepB DTaP-HepB-IPV									
Hib-HepB DTaP-HepB-IPV									
Hepatitis A									
Type is: HepA									
Delie									
Polio Types are:									
IPV									
DTaP-HepB-IPV									
Measles, Mumps, Rubella Types are : MMR MMRV									
<b>Varicella</b> Types are: Var MMRV									
WINITY				•					
Pneumococcal conjugate									
Type is: PCV7									
Rotavirus									
Type is: Rota									
Influenza									
Types are: TIV (Injectable)									
LAIV (Intranasal) (More space on the reverse side.)									
Meningococcal									
Types are: MCV4 MPSV4									
Human Papillomavirus									
Papillomavirus Type is: HPV4									

Place an asterisk (\*) next to the date the vaccine was given to indicate vaccines administered elsewhere.
 Site Code: LA=LT ARM, RA=RT ARM, LL=LT LEG, RL=RT LEG
 Client Status: M=Medicaid, U=Uninsured, D=Underinsured, P=Private Insurance, A=American Indian or Alaskan Native, V=MIVRP, L=Other Public Purchase

Patient Name:	Date of Birth:	MCIR ID#	
i aliciil Nailie.	Date of Diffi.	MCIIX ID#	

Vaccine	Date Vaccine & Vaccine Information Statement Given	Type of Vaccine	Date on Vaccine Information Statement (VIS)	Vaccine Manf.	Vaccine Lot Number	Site Given <sup>2</sup>	Route <sup>3</sup>	Signature of Vaccine Administrator	Client VFC Status
Influenza Types are:									
TIV									
LAIV									
Other									
Other									
Other									
Other									

#### Note:

Patients/parents should be informed about the risks and benefits associated with immunizations including those associated with the vaccine-preventable disease. Federal and state guidelines do not require a parent/patient signature to administer vaccines. However, health care providers have the option to obtain a signature. Check with your agency for specific requirements.

I have been given a copy and have read, or have had explained to me, the information contained on the appropriate Vaccine Information Statement (VIS) about the disease(s) and the vaccine(s) which are to be administered today. I have had a chance to ask questions that were answered to my satisfaction. I understand the benefits and risks of the specific vaccine(s) and I ask that the vaccine(s) I have requested be given to me, or to the person named, for whom I am authorized to make this request.

1. SIGNATURE	DATE	Insurance Status	7. SIGNATURE	DATE	Insurance Status
2. SIGNATURE	DATE	Insurance Status	8. SIGNATURE	DATE	Insurance Status
3. SIGNATURE	DATE	Insurance Status	9. SIGNATURE	DATE	Insurance Status
4. SIGNATURE	DATE	Insurance Status	10. SIGNATURE	DATE	Insurance Status
5. SIGNATURE	DATE	Insurance Status	11. SIGNATURE	DATE	Insurance Status
6. SIGNATURE	DATE	Insurance Status	12. SIGNATURE	DATE	Insurance Status



## **Vaccine Storage Basics**

#### 1. Keep the refrigerator/freezer plugged in and cold

- 1. Refrigerators should have separate, sealed refrigerator & freezer compartments
- 2. Have separate temperature controls for refrigerator & freezer compartments
- a. Put certified thermometers in the refrigerator and in the freezer
- b. Check and record the temperature in the refrigerator & freezer twice daily
- c. Use a safety plug or plug cover to prevent accidental disconnection
- d. Place "DO NOT UNPLUG" warnings near the outlet and circuit breaker
- e. Keep water bottles in refrigerator and ice packs in freezer

#### 2. Keep these vaccines in the refrigerator (35° – 46° F or 2° – 8° C)

 LAIV
 Hep B
 Rota

 DTaP, Tdap, Td, DT
 HPV4
 PCV7

 Hib
 MMR\*
 PPV23

 IPV
 MCV4
 TIV

 Hep A
 MPSV4

a. Put them in the refrigerator as soon as they arrive

#### 3. Keep these vaccines frozen (5°F or -15°C or lower)

Varicella MMRV MMR\* Zoster

a. Put them in the freezer as soon as they arrive

#### 4. Keep vaccines protected from light

a. Remove individual dose vials from cardboard package only as needed

#### 5. Do not allow vaccine to expire

- a. Check expiration dates monthly
- b. Place vaccines so those that will expire first are used first
- c. Stock only what you can use in 1–2 months
- d. For VFC vaccine: call your local health department VFC contact person if any of your VFC vaccine will expire in 3-6 months

#### 6. Transport vaccines correctly

- Refrigerated vaccines must be transported in an insulated cooler with a barrier separating the vaccines from the ice/cold packs
- b. Place a thermometer in the cooler to monitor the temperature
- c. Frozen vaccines can only be transported in an insulated cooler with dry ice
- d. Place vaccines appropriately in the refrigerator or freezer immediately upon arrival at the clinic

<sup>\*</sup> MMR vaccine can be stored in the refrigerator or the freezer



### Information for People with Chronic Hepatitis B Infection How to Take Care of Yourself and Others

People with chronic hepatitis B virus (HBV) infection (having HBV for more than six months) are known as carriers. Carriers who get HBV at a young age have an increased risk of liver disease as adults. Most HBV carriers do not feel or look sick, but still need to see their doctor at least once a year for follow-up care.

Carriers may feel healthy, but they can still give HBV to others. Carriers must protect others from their blood, or other body fluids such as semen and vaginal fluids. HBV is not spread by sneezing, coughing, or by casual contact such as holding hands or hugging.

#### What you can do to take care of yourself

- See your doctor for a check-up at least once a year
- Review all medications (prescription, over-the-counter, and alternative) with your doctor
- Discuss with your doctor about getting periodic ultrasounds, alpha-fetoprotein (AFP) blood tests, or other studies to make sure there is no evidence of a developing liver cancer
- Don't drink alcohol because it can further damage your liver, especially when used with acetaminophen (an ingredient found in cold and headache remedies)
- Don't eat raw oysters
- Get the hepatitis A vaccinations and all other immunizations that may be needed

#### What you can do to protect others

- If you are pregnant, tell your doctor that you have HBV so your baby can get the hepatitis B (hepB) vaccine and hepatitis B immune globulin (HBIG) at birth
- Cover all cuts and open sores
- Properly dispose of all items such as tissues, menstrual pads and tampons, so others don't come into contact with any blood or body fluids
- Wash hands well after touching your blood or body fluids
- Clean up blood spills with one part bleach to ten parts water
- Make sure all household and sexual partners are tested and treated
- Tell your sexual partner(s) that you have HBV and continue to use a latex condom until they have had a blood test and are fully vaccinated, if needed
- Let your doctor and dentist know that you have HBV
- Do **NOT** share food or gum that has been in your mouth
- Do **NOT** share toothbrushes, razors, tattooing and body piercing equipment, earrings, nail files, clippers, or anything that may have come into contact with your blood or body fluids
- Do NOT share syringes or needles
- Do **NOT** donate blood, plasma, body organs, tissue, sperm or eggs



#### **Advice for Parents**

Parents face many issues while raising their children, but having a child with the hepatitis B virus (HBV) presents new challenges.

#### Avoid the spread of HBV

- All parents, siblings and other household members need hepatitis B (hepB) vaccine.
- Extended family members, childcare providers, family, friends and others that have frequent and close contact with an infected child should consider hepB vaccination.

#### **Know the facts**

- Give clear and simple facts about hepatitis B:
  - It is spread through blood and infected body fluids.
  - It can be spread through bites or open wounds.
  - It cannot be spread by sharing toys, sneezing, coughing, spitting, or hugging.
  - There is a safe and effective vaccine to protect you.

#### **Telling others**

- Consider if your child is at high or low risk for exposing others to his or her blood or body fluids (e.g., consider age, frequency of accidents, nosebleeds, biting, frequent or occasional contact).
- More and more children are now getting vaccinated against HBV, so the risk of your child infecting others is reduced.
- Use common sense in deciding whom to tell about your child's HBV. Once you tell someone, you cannot take it back!

#### **Practice Universal Precautions**

- Blood and body fluids should be treated as if they are potentially infectious.
- Clean all spills with a diluted solution of bleach (one part bleach and ten parts water).
- Properly dispose of items used to clean spills.
- Properly dispose of items such as tissues, menstrual pads and tampons, band-aids, and wound dressings so others don't come into contact with any blood or body fluids.
- Wash your hands thoroughly with soap and warm water.

(Modified from the Hepatitis B Foundation's Advice for Parents)

## Countries with Moderate or High Rates of Hepatitis B

(Greater than 2% of the population is HBsAg positive for Hep B)

Afghanistan French Polynesia Sevchelles Malawi Albania Gabon Malaysia Sierra Leone Algeria Gambia, The Maldives Singapore American Samoa Georgia Mali Slovakia Ghana Solomon Islands Angola Malta Antigua & Barbuda Greece Marshall Islands Somalia Armenia Grenada Martinique South Africa Guadeloupe Mauritania Spain Azerbajan St. Kitts and Nevis Bahrain Guam Mauritius Bangladesh Guatemala Micronesia, FSM

St. Lucia Benin Guinea Sudan Moldova Bhutan Guinea-Bissau Mongolia Suriname Morocco Botswana Guyana Swaziland Haiti Syrian Arab Republic Brazil Mozambique

Brunei Honduras Myanmar Taiwan
Bulgaria Hong Kong Namibia Tajikistan
Burkina Faso India Nepal Tanzania, United Rep.

Burundi Indonesia Netherlands Antilles Thailand
Byelorus Iran New Caledonia Togo

Cambodia (Kampuchea) Iraq Niger Tonga Nigeria Cameroon Israel Tunisia Cape Verde Northern Marinia Turkey Italy Cayman Islands Jamaica Oman Turkmenistan Central African Republic Pakistan Uganda Japan

Chad Jordan Palau Ukraine
China Kazakhstan Papau New Guinea United Arab Emirates

ComorosKenyaParaguayUNRWACongo, Peoples RepublicKirgyzstanPeruUzbekistanCook IslandsKiribatiPhilippinesVanuatuCote d'IvoireKorea, Peoples (DPR)PolandVenezuela

Cote d'IvoireKorea, Peoples (DPR)PolandVenezuelaCzechloslavakiaKorea, Republic of<br/>KuwaitPortugal<br/>Puerto RicoVietnam<br/>Virgin Islands, U.S.

Dominica Laos Qatar Wallis and Futuna

Dominican Republic Latvia Reunion Yemen

Ecuador Lebanon Romania Yemen Dem Eqypt, Arab Republic of Lesotho Russia Yugoslavia Equatorial Guinea Liberia Rwanda Zaire

Equatorial Guinea Liberia Rwanda Zaire
Estonia Libya Samoa, Western Zambia
Ethiopia Lithuania Sao Tome & Principe Zimbabwe

Fiji Macau Sao Tome & Principe 2

Fiji Macau Saudi Arabia

French Guiana Madagascar Senegal

Rev 09/01/05

## Free immunization brochures and materials order form

### Submit your order at www.healthymichigan.com

You may also fax this order form to (517) 699-2376. For information about orders that have already been placed, call the Michigan Department of Community Health (MDCH) Clearinghouse toll-free at (888) 76-SHOTS. Other questions should be directed to the MDCH Division of Immunization (517) 335-8159.

**Please enter quantity for each requested item.** (Orders for brochures are usually limited to 500, unless otherwise stated. Limits on orders may be temporarily decreased if inventory is low.)

Quantity needed	Item requested
(Limit 1)	2008 Alliance for Immunization in Michigan (AIM) Provider Tool Kit – (Updated annually) This packet is designed for health care professionals who administer vaccines to their patients. Immunization schedules for children, adolescents and adults are included, along with information about contraindications, administration, documentation, and storage and handling of vaccines.
	The AIM Provider Tool Kit is now online:
	www.aimtoolkit.org
	The Individual Immunization Record card has replaced the Adult Immunization Record card. The new card is used for children, adolescents and adults in Michigan.
	The limit for orders placed through the MDCH Clearinghouse is 250.
(Limit 250)	<b>Hospitals and local health departments:</b> Please place your orders directly with the Michigan Department of Community Health's Division of Immunization by calling (517) 335-8159.
(Limit 50)	Influenza Vaccination Pocket Guide – (the pocket guides are for health care providers only)
(Limit 50)	Pneumococcal Polysaccharide (PPV23) Vaccination Pocket Guide – (for health care providers)
Quantity needed	Brochures
	Protect Babies and Toddlers from Serious Diseases
	Keep Your Family Safe from the Flu
	If you have Diabetes, Getting a Flu Shot is a Family Affair
	Shots for your Child (about the Vaccines for Children program)

Quantity needed	Brochures								
	Protect Pre-Teens and Teens from Serious Diseases (This brochure will be available in June 2008. This is a new brochure that replaces an older brochure for teens called "Are you 11-19 Years Old? Teens and Immunizations.")								
	Adult Immunizations: Are you protected?								
	Hepatitis B: What Parents Need to Know (With special information for pregnant women)								
	The Dangers of Hepatitis B: What they are, How to avoid them								
	Hepatitis, What you need to know (ABCs)								
	Childhood Immunizations: Vaccine Safety (This brochure will be available in June 2008. This is a new brochure that replaces an older brochure called "Vaccine Safety.")								
	Antibiotics: What You Should Know								
	To order:								
• Sub	mit your order at www.healthymichigan.com								
• This	form may also be faxed to the MDCH Clearinghouse at (517) 699-2376								
Name:									
Type of Clinic/practice:	□ Pediatric □ Family Practice □ Adult/Internal Med □ OB/GYN □ Specialty								
Email address*:									
Street address*:									
City:	State: MI** Zip code:								
Phone no.:	(include area code)								
*Complete email add	lress to receive immunization information updates.								
** Reminder: We ca	annot ship to P.O. boxes. ** Materials are available to Michigan residents only.								
	n or for special requests, contact the Michigan Department of Community Health, ation (517) 335-8159.  Revised 5/19/08								



## **Immunization Materials**

Order Date:			
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To order, complete the shipping information below, then indicate the quantity of each item you desire. Where possible, the latest revision date for an item is given. **NOTE:** Private providers, mail your order to your local county health department. Local county health departments, mail/fax your order to the Division of Immunization, Michigan Department of Community Health, 201 Townsend Street, PO Box 30195, Lansing, MI 48909; fax number: 517-335-9855. **Orders cannot be shipped to a PO Box.** 

Organization	Contact Person
Street Address	Phone Number (include area code)
City	Zip Code

### **FORMS**

Quantity		Quantity	
	Health Appraisal Form (7-2006) OCAL-3305		Official Certificate of Immunization - Wallet Size (2-2007) DCH-0592
	Immunization Materials Order Form (5-2007) DCH-0487		Perpetual Inventory Record Card (8" x 5") (2-2002) DCH-1117
	Immunization Signature Record Card (4-2007) DCH-0606		Perpetual Inventory Record Sheet (5-91) DCH-0607
	Mich. School Bldg. Weekly Report for Communicable Disease (3-2005) DCH-0453		Vaccine Administration Record (9-94) IP-95
	MOMS Reminder Card (General) (1-96) IP-12		Vaccine Adverse Event Reporting System VAERS-1
	MOMS Reminder Card (Tots) (1-96) IP-12A		

## PERINATAL HEPATITIS B MATERIALS (Call 517-335-8122 to order hepatitis B forms)

Quantity		Quantity	
	NEW Alert Stickers (Infant Must receive HBIG & 1st dose Hep B within 12 hours of birth)		Hepatitis B Perinatal Case Report Infant/ Contact DCH-0973 REVISED 4-08
	Important Cards		Mothers — Don't share hepatitis B" Cards IP-87
	Alert Stickers (Must complete Hep B Series and Have a Blood Test)		

## **VACCINE INFORMATION STATEMENTS (VIS)**

	NEW! Multi-Vaccine VIS — This 4-page VIS provides information on
QUANTITY:	hepatitis B, Polio, Pneumococcal disease, DTaP, Rotovirus & Hib vaccines. For
	patients 0-6 months of age.

MORE VACCINE INFORMATION STATEMENTS ON BACK > > >

DCH-0487 Rev. 4-2008

#### **VACCINE INFORMATION STATEMENTS (VISS)**

All Vaccine Information Statements are available in the languages shown unless otherwise noted. Please indicate the number of VIS sheets you require in each language desired. All English VISs are available ONLY in packages of 250. All translations may have the same version date as the English version. The following VISs are available in the indicated languages.

same version date as the English ve	same version date as the English version. The following VISs are available in the indicated languages.					
	English (E), Albanian (AL), Arabic (AR), Armenian (A), Bosnian (B), Burmese (BU)					
	Cambodian (CA), Chinese (C), Croation (Serbian) (CR), Farsi (FA), French (F), German (G),					
LANGUAGE	Haitian Creole (HC), Hindi (HI), Hmong (H), Ilokano (IL), Italian (I), Japanese (J), Korean					
KEY 🍜	(K), Laotian (L), Marshallese (M), Polish (PO), Portuguese (P), Punjabi (PU), Romanian (RO),					
	Russian (RU), Samoan (SA), Serbo-Croatian (SC), Somali (SO), Spanish (S), Tagalog (T), Thai					
	(TH), Turkish (TU), Vietnamese (V)					
Chickenpox	Available in: All <b>except</b> M					
DTaP	Available in: All except M					
Hib	Available in: All <b>except</b> M					
Hepatitis A	Available in: All except BU, M					
Hepatitis B	Available in: All except M					
Influenza	Available in: All except AR, BU, G, M, RO, SA					
Japanese Encephalitis	Available in E					
MMR	Available in: All languages					
Meningococcal	Available in: E, HC, PO, RU, SO, S, TH, TU					
Pneumococcal Conjugate	Available in: All except BU, M					
Pneumococcal Polysaccharide	Available in: E, CA, C, HC, H, L, RU, SO, S, TH, TU, V					
Polio	Available in: All except BU, M					
Rabies	Available in: E, S					
Rotavirus	Available in: E, S, TH					
Smallpox	Available in: E, CA, H, L, RU, SC, SO, S, V					
Td	Available in: All except BU, M					
Tdap	Available in: E, S					
Typhoid	Available in: E, S					
Yellow Fever	Available in: E, S					

**To order VIS in the desired language**, please indicate how many of each language you need. Example: For Chickenpox – 250 E, 100 S, 25 J = Equals: 250 English, 100 Spanish & 25 Japanese. **Please PRINT clearly.** 

Cinckenpox – 230 E, 100 S, 23 J – Equa	is. 230 English, 100 Spanish & 23 Japanese. Flease FRINT clearly.
Chickenpox	
DTaP	
Hib	
Hepatitis A	
Hepatitis B	
Human Papillomavirus (E , S, TH Only)	
Influenza	
MMR	
Meningococcal	
Pneumococcal Conjugate	
Pneumococcal Polysaccharide	
Polio	
Rabies	
Rotavirus	
Smallpox	
Shingles (English Only)	
Td	
Tdap	
Typhoid	
Yellow Fever	

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## Web Sites for Hepatitis Resources

American Academy of Pediatrics	www.aap.org
Centers for Disease Control & Prevention (CDC)	
CDC Morbidity and Mortality Weekly Report (MMWR)	
Immunization Action Coalition (IAC)	
IAC (vaccine information)	
Immunization Gateway	
Michigan Occupational Safety and Health Administration (MIOSHA)	
MIOSHA Standards for Bloodborne Pathogens www.michigan.gov/docum	
Parents of Kids w/Infectious Diseases (PKIDS)	
Partnership for Prescription Assistance	
Patient Advocate Foundation	
Vaccine Safety	
World Health Organization (WHO)	
HEPATITIS INFORMATION	· · · · · · · · · · · · · · · · · · ·
American Gastroenterological Association	www gastro org
American Liver Foundation	
Asian Liver Center	
CDC Hepatitis Information	
Clinical Trial Information	
Hepatitis and Intravenous Drug Use	
Hepatitis B Foundation (Liver Specialists)	
Hepatitis B Info Page	
Hepatitis B Recommendations: "A Comprehensive Immunization Strategy	
B Virus Infection in the United States"	nwr/preview/mmwrhtml/rr5416a1 htm
Hepatitis B support information	www hhlist org
Hepatitis C Info Page	
Hepatitis C Connection	
Hepatitis Foundation International	
	www.henfi.org
Hepatitis Support Project	<u>www.hbvadvocate.org</u>
HIV and Hepatitis Site	www.hbvadvocate.org
HIV and Hepatitis Site	www.hbvadvocate.org www.HIVandHepatitis.com www.Janis7hepc.com
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## Recommended Immunization Schedule for Persons Aged 0-6 Years—UNITED STATES • 2008

For those who fall behind or start late, see the catch-up schedule

Vaccine <b>▼</b> Age <b>►</b>	Birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B <sup>1</sup>	НерВ	He	рВ	see footnote1		He	рВ	:	•		
Rotavirus <sup>2</sup>	0 0 0 0 0 0 0	0 0 0 0 0	Rota	Rota	Rota	0 0 0 0 0 0	8 6 6 7 8 9	- - - - - - - -	0 0 0 0 0 0		
Diphtheria, Tetanus, Pertussis <sup>3</sup>	9 9 9 9 9 9	* • • • •	DTaP	DTaP	DTaP	see footnote3	Dī	aP	* * * * * * * * * * * * * * * * * * *		DTaP
Haemophilus influenzae type b⁴	9 9 9 9 9 9 9	0 0 0 0 0 0	Hib	Hib	Hib⁴	Н	ib	9 9 9 9 9 9 9	0 0 0 0 0		*
Pneumococcal⁵	# · · · · · · · · · · · · · · · · · · ·	**************************************	PCV	PCV	PCV	PO	CV	**************************************	0 0 0 0 0	P	PV
Inactivated Poliovirus	**************************************	**************************************	IPV	IPV		IF	V		0 0 0 0 0 0		IPV
Influenza <sup>6</sup>	9 · · · · · · · · · · · · · · · · · · ·	**************************************		0 0 0 0 0 0			Influe	ıza (Yea	rly)		
Measles, Mumps, Rubella <sup>7</sup>	• • • • • • • • • • • • • • • • • • •	**************************************			**************************************	МІ	MR	**************************************			MMR
Varicella <sup>®</sup>	0 · · · · · · · · · · · · · · · · · · ·	**************************************			**************************************	Vari	cella	**************************************			<b>Varicella</b>
Hepatitis A <sup>9</sup>	## * * * * * * * * * * * * * * * * * *	**************************************		*	**************************************	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	НерА (	2 doses	)	НерА	Series
Meningococcal <sup>10</sup>		• • • • • • • • • • • • • • • • • • •		**************************************	•	**************************************	**************************************	**************************************	**************************************	MC	V4

Range of recommended ages

Certain high-risk groups

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2007, for children aged 0 through 6 years. Additional information is available at <a href="https://www.cdc.gov/vaccines/recs/schedules">www.cdc.gov/vaccines/recs/schedules</a>. Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components of the vaccine are not

contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective Advisory Committee on Immunization Practices statement for detailed recommendations, including for high-risk conditions: http://www.cdc.gov/vaccines/pubs/ACIP-list.htm. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form is available at www.vaers.hhs.gov or by telephone, 800-822-7967.

## 1. Hepatitis B vaccine (HepB). (Minimum age: birth) At birth:

- Administer monovalent HepB to all newborns prior to hospital discharge.
- If mother is hepatitis B surface antigen (HBsAg) positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
- If mother's HBsAg status is unknown, administer HepB within 12 hours of birth. Determine the HBsAg status as soon as possible and if HBsAg positive, administer HBIG (no later than age 1 week).
- If mother is HBsAg negative, the birth dose can be delayed, in rare cases, with a provider's order and a copy of the mother's negative HBsAg laboratory report in the infant's medical record.

#### After the birth dose:

The HepB series should be completed with either monovalent HepB or a
combination vaccine containing HepB. The second dose should be administered
at age 1–2 months. The final dose should be administered no earlier than age
24 weeks. Infants born to HBsAg-positive mothers should be tested for HBsAg
and antibody to HBsAg after completion of at least 3 doses of a licensed HepB
series, at age 9–18 months (generally at the next well-child visit).

#### 4-month dose:

 It is permissible to administer 4 doses of HepB when combination vaccines are administered after the birth dose. If monovalent HepB is used for doses after the birth dose, a dose at age 4 months is not needed.

#### 2. Rotavirus vaccine (Rota). (Minimum age: 6 weeks)

- Administer the first dose at age 6-12 weeks.
- Do not start the series later than age 12 weeks.
- Administer the final dose in the series by age 32 weeks. Do not administer any dose later than age 32 weeks.
- Data on safety and efficacy outside of these age ranges are insufficient.

## 3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). (Minimum age: 6 weeks)

- The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose.
- Administer the final dose in the series at age 4–6 years.

#### Haemophilus influenzae type b conjugate vaccine (Hib). (Minimum age: 6 weeks)

- If PRP-OMP (PedvaxHIB® or ComVax® [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required.
- TriHIBit® (DTaP/Hib) combination products should not be used for primary immunization but can be used as boosters following any Hib vaccine in children age 12 months or older.

- Pneumococcal vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPV])
  - Administer one dose of PCV to all healthy children aged 24–59 months having any incomplete schedule.
  - Administer PPV to children aged 2 years and older with underlying medical conditions.
- 6. Influenza vaccine. (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])
  - Administer annually to children aged 6–59 months and to all eligible close contacts of children aged 0–59 months.
  - Administer annually to children 5 years of age and older with certain risk factors, to other persons (including household members) in close contact with persons in groups at higher risk, and to any child whose parents request vaccination.
  - For healthy persons (those who do not have underlying medical conditions that predispose them to influenza complications) ages 2–49 years, either LAIV or TIV may be used.
  - Children receiving TIV should receive 0.25 mL if age 6–35 months or 0.5 mL if age 3 years or older.
  - Administer 2 doses (separated by 4 weeks or longer) to children younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time last season but only received one dose.

#### 7. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)

 Administer the second dose of MMR at age 4–6 years. MMR may be administered before age 4–6 years, provided 4 weeks or more have elapsed since the first dose.

#### 8. Varicella vaccine. (Minimum age: 12 months)

- Administer second dose at age 4–6 years; may be administered 3 months or more after first dose.
- Do not repeat second dose if administered 28 days or more after first dose.

#### 9. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- Administer to all children aged 1 year (i.e., aged 12–23 months). Administer the 2 doses in the series at least 6 months apart.
- Children not fully vaccinated by age 2 years can be vaccinated at subsequent visits.
- HepA is recommended for certain other groups of children, including in areas where vaccination programs target older children.

## 10. Meningococcal vaccine. (Minimum age: 2 years for meningococcal conjugate vaccine (MCV4) and for meningococcal polysaccharide vaccine (MPSV4))

- Administer MCV4 to children aged 2–10 years with terminal complement deficiencies or anatomic or functional asplenia and certain other high-risk groups. MPSV4 is also acceptable.
- Administer MCV4 to persons who received MPSV4 3 or more years previously and remain at increased risk for meningococcal disease.

## Recommended Immunization Schedule for Persons Aged 7–18 Years—UNITED STATES • 2008

For those who fall behind or start late, see the green bars and the catch-up schedule

Variation — Anna	7.40	44.40	40.40
Vaccine ▼ Age ►	7–10 years	11-12 years	13-18 years
Diphtheria, Tetanus, Pertussis <sup>1</sup>	see footnote 1	Tdap	Tdap
Human Papillomavirus²	see footnote 2	HPV (3 doses)	HPV Series
Meningococcal <sup>3</sup>	MCV4	MCV4	MCV4
Pneumococcal <sup>4</sup>		PPV	:
Influenza <sup>5</sup>		Influenza (Yearly)	:
Hepatitis A <sup>6</sup>		HepA Series	
Hepatitis B <sup>7</sup>		HepB Series	:
Inactivated Poliovirus <sup>8</sup>		IPV Series	:
Measles, Mumps, Rubella <sup>9</sup>		MMR Series	:
Varicella <sup>10</sup>		Varicella Series	

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2007, for children aged 7–18 years. Additional information is available at <a href="https://www.cdc.gov/vaccines/recs/schedules">www.cdc.gov/vaccines/recs/schedules</a>. Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components of the vaccine are not

contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective Advisory Committee on Immunization Practices statement for detailed recommendations, including for high risk conditions: http://www.cdc.gov/vaccines/pubs/ACIP-list.htm. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form is available at www.vaers.hhs.gov or by telephone, 800-822-7967.

- 1. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap). (Minimum age: 10 years for BOOSTRIX® and 11 years for ADACEL™)
  - Administer at age 11–12 years for those who have completed the recommended childhood DTP/DTaP vaccination series and have not received a tetanus and diphtheria toxoids (Td) booster dose.
  - 13–18-year-olds who missed the 11–12 year Tdap or received Td only are encouraged to receive one dose of Tdap 5 years after the last Td/DTaP dose.
- 2. Human papillomavirus vaccine (HPV). (Minimum age: 9 years)
  - Administer the first dose of the HPV vaccine series to females at age 11–12 years.
  - Administer the second dose 2 months after the first dose and the third dose 6 months after the first dose.
  - Administer the HPV vaccine series to females at age 13–18 years if not previously vaccinated.

#### 3. Meningococcal vaccine.

- Administer MCV4 at age 11–12 years and at age 13–18 years if not previously vaccinated. MPSV4 is an acceptable alternative.
- Administer MCV4 to previously unvaccinated college freshmen living in dormitories.
- MCV4 is recommended for children aged 2–10 years with terminal complement deficiencies or anatomic or functional asplenia and certain other high-risk groups.
- Persons who received MPSV4 3 or more years previously and remain at increased risk for meningococcal disease should be vaccinated with MCV4.

#### 4. Pneumococcal polysaccharide vaccine (PPV).

Administer PPV to certain high-risk groups.

#### 5. Influenza vaccine.

- Administer annually to all close contacts of children aged 0–59 months.
- Administer annually to persons with certain risk factors, health-care workers, and other persons (including household members) in close contact with persons in groups at higher risk.

- Administer 2 doses (separated by 4 weeks or longer) to children younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time last season but only received one dose.
- For healthy nonpregnant persons (those who do not have underlying medical conditions that predispose them to influenza complications) ages 2–49 years, either LAIV or TIV may be used.

#### 6. Hepatitis A vaccine (HepA).

- Administer the 2 doses in the series at least 6 months apart.
- HepA is recommended for certain other groups of children, including in areas where vaccination programs target older children.

#### 7. Hepatitis B vaccine (HepB).

- Administer the 3-dose series to those who were not previously vaccinated.
- A 2-dose series of Recombivax HB® is licensed for children aged 11–15 years.

#### 8. Inactivated poliovirus vaccine (IPV).

- For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if the third dose was administered at age 4 years or older.
- If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.

#### 9. Measles, mumps, and rubella vaccine (MMR).

• If not previously vaccinated, administer 2 doses of MMR during any visit, with 4 or more weeks between the doses.

#### 10. Varicella vaccine.

- Administer 2 doses of varicella vaccine to persons younger than 13 years of age at least 3 months apart. Do not repeat the second dose if administered 28 or more days following the first dose.
- Administer 2 doses of varicella vaccine to persons aged 13 years or older at least 4 weeks apart.

## **Catch-up Immunization Schedule**

## for Persons Aged 4 Months-18 Years Who Start Late or Who Are More Than 1 Month Behind

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age.

		CATCH-UP SCHEDULE FOR PER	SONS AGED 4 MONTHS–6 YEARS							
Vaccine	Minimum Age		Minimum Interval Between Doses							
vaccine	for Dose 1	Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5					
Hepatitis B <sup>1</sup>	Birth	4 weeks	8 weeks (and 16 weeks after first dose)							
Rotavirus <sup>2</sup>	6 wks	4 weeks	4 weeks	ļ	ļ					
Diphtheria, Tetanus, Pertussis <sup>3</sup>	6 wks	4 weeks	4 weeks	6 months	6 months <sup>3</sup>					
Haemophilus influenzae type b <sup>4</sup>	6 wks	4 weeks if first dose administered at younger than 12 months of age 8 weeks (as final dose) if first dose administered at age 12-14 months No further doses needed if first dose administered at 15 months of age or older	4 weeks <sup>4</sup> if current age is younger than 12 months  8 weeks (as final dose) <sup>4</sup> if current age is 12 months or older and second dose administered at younger than 15 months of age  No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months-5 years who received 3 doses before age 12 months						
Pneumococcal <sup>5</sup>	6 wks	4 weeks if first dose administered at younger than 12 months of age  8 weeks (as final dose) if first dose administered at age 12 months or older or current age 24–59 months  No further doses needed for healthy children if first dose administered at age 24 months or older	4 weeks if current age is younger than 12 months 8 weeks (as final dose) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months-5 years who received 3 doses before age 12 months						
Inactivated Poliovirus <sup>6</sup>	6 wks	4 weeks	4 weeks	4 weeks <sup>6</sup>	Ì					
Measles, Mumps, Rubella <sup>7</sup>	12 mos	4 weeks								
Varicella <sup>8</sup>	12 mos	3 months								
Hepatitis A <sup>9</sup>	12 mos	6 months								
		CATCH-UP SCHEDULE FOR	PERSONS AGED 7–18 YEARS							
Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis <sup>10</sup>	7 yrs <sup>10</sup>	4 weeks	4 weeks if first dose administered at younger than 12 months of age 6 months if first dose administered at age 12 months or older	6 months if first dose administered at younger than 12 months of age						
Human Papillomavirus <sup>11</sup>	9 yrs	4 weeks	<b>12 weeks</b> (and 24 weeks after the first dose)							
Hepatitis A <sup>9</sup>	12 mos	6 months		ļ	ļ					
Hepatitis B <sup>1</sup>	Birth	4 weeks	8 weeks (and 16 weeks after first dose)							
Inactivated Poliovirus <sup>6</sup>	6 wks	4 weeks	4 weeks	4 weeks <sup>6</sup>						
Measles, Mumps, Rubella <sup>7</sup>	12 mos	4 weeks								
Varicella <sup>8</sup>	12 mos	4 weeks if first dose administered at age 13 years or older 3 months if first dose administered at younger than 13 years of age								

#### 1. Hepatitis B vaccine (HepB).

- Administer the 3-dose series to those who were not previously vaccinated.
- A 2-dose series of Recombivax HB® is licensed for children aged 11-15 years.

#### 2. Rotavirus vaccine (Rota).

- Do not start the series later than age 12 weeks.
- · Administer the final dose in the series by age 32 weeks.
- Do not administer a dose later than age 32 weeks.
- · Data on safety and efficacy outside of these age ranges are insufficient.

#### 3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).

- The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.
- DTaP is not indicated for persons aged 7 years or older.

#### 4. Haemophilus influenzae type b conjugate vaccine (Hib).

- Vaccine is not generally recommended for children aged 5 years or older.
- If current age is younger than 12 months and the first 2 doses were PRP-OMP (PedvaxHIB® or ComVax® [Merck]), the third (and final) dose should be administered at age 12–15 months and at least 8 weeks after the second dose.
- If first dose was administered at age 7–11 months, administer 2 doses separated by 4 weeks plus a booster at age 12–15 months.

#### 5. Pneumococcal conjugate vaccine (PCV).

- Administer one dose of PCV to all healthy children aged 24–59 months having any incomplete schedule.
- For children with underlying medical conditions, administer 2 doses of PCV at least 8 weeks apart if previously received less than 3 doses, or 1 dose of PCV if previously received 3 doses.

#### 6. Inactivated poliovirus vaccine (IPV).

 For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if third dose was administered at age 4 years or older.

- If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
- IPV is not routinely recommended for persons aged 18 years and older.

#### 7. Measles, mumps, and rubella vaccine (MMR).

- The second dose of MMR is recommended routinely at age 4–6 years but may be administered earlier if desired.
- If not previously vaccinated, administer 2 doses of MMR during any visit with 4 or more weeks between the doses.

#### 8. Varicella vaccine.

- The second dose of varicella vaccine is recommended routinely at age 4–6 years but may be administered earlier if desired.
- Do not repeat the second dose in persons younger than 13 years of age if administered 28 or more days after the first dose.

#### 9. Hepatitis A vaccine (HepA).

 HepA is recommended for certain groups of children, including in areas where vaccination programs target older children. See MMWR 2006;55(No. RR-7):1–23.

#### Tetanus and diphtheria toxoids vaccine (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).

- Tdap should be substituted for a single dose of Td in the primary catch-up series or as a booster
  if age appropriate; use Td for other doses.
- A 5-year interval from the last Td dose is encouraged when Tdap is used as a booster dose. A
  booster (fourth) dose is needed if any of the previous doses were administered at younger than
  12 months of age. Refer to ACIP recommendations for further information.
   See MMWR 2006;55(No. RR-3).

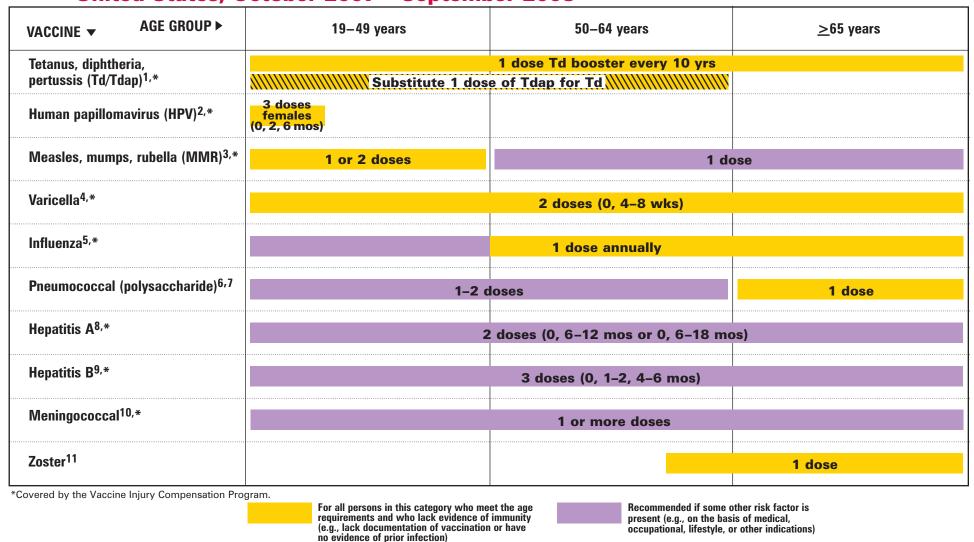
#### 11. Human papillomavirus vaccine (HPV).

Administer the HPV vaccine series to females at age 13–18 years if not previously vaccinated.

## **Recommended Adult Immunization Schedule**

Note: These recommendations must be read with the footnotes that follow.

Figure 1. Recommended adult immunization schedule, by vaccine and age group United States, October 2007 - September 2008



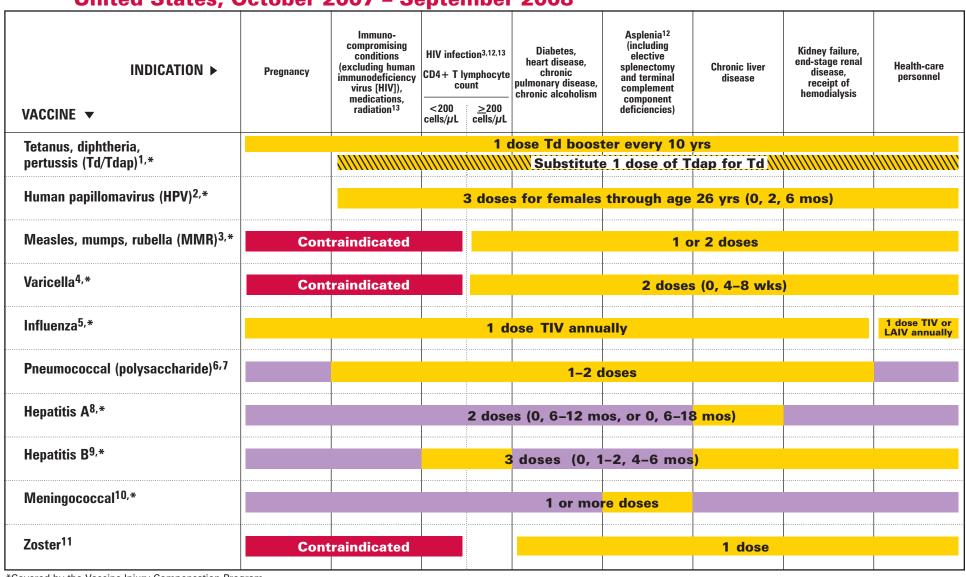
Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at www.vaers.hhs.gov or by telephone,

Information on how to file a Vaccine Injury Compensation Program claim is available at www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination is also available at www.cdc.gov/vaccines or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 24 hours a day, 7 days a week.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

Figure 2. Vaccines that might be indicated for adults based on medical and other indications United States, October 2007 – September 2008



\*Covered by the Vaccine Injury Compensation Program.

For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)

Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of October 1, 2007. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/pubs/acip-list.htm).





## **Footnotes**

## Recommended Adult Immunization Schedule · United States, October 2007 - September 2008

For complete statements by the Advisory Committee on Immunization Practices (ACIP), visit www.cdc.gov/vaccines/pubs/ACIP-list.htm.

#### 1. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination

Tdap should replace a single dose of Td for adults aged < 65 years who have not previously received a dose of Tdap. Only one of two Tdap products (Adacel<sup>®</sup>[sanofi pasteur]) is licensed for use in adults.

Adults with uncertain histories of a complete primary vaccination series with tetanus and diphtheria toxoid—containing vaccines should begin or complete a primary vaccination series. A primary series for adults is 3 doses of tetanus and diphtheria toxoid—containing vaccines; administer the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second. However, Tdap can substitute for any one of the doses of Td in the 3-dose primary series. The booster dose of tetanus and diphtheria toxoid—containing vaccine should be administered to adults who have completed a primary series and if the last vaccination was received ≥10 years previously. Tdap or Td vaccine may be used, as indicated.

If the person is pregnant and received the last Td vaccination  $\geq$ 10 years previously, administer Td during the second or third trimester; if the person received the last Td vaccination in <10 years, administer Tdap during the immediate postpartum period. A one-time administration of 1 dose of Tdap with an interval as short as 2 years from a previous Td vaccination is recommended for postpartum women, close contacts of infants aged <12 months, and all health-care workers with direct patient contact. In certain situations, Td can be deferred during pregnancy and Tdap substituted in the immediate postpartum period, or Tdap can be administered instead of Td to a pregnant woman after an informed discussion with the woman.

Consult the ACIP statement for recommendations for administering Td as prophylaxis in wound management.

#### 2. Human papillomavirus (HPV) vaccination

HPV vaccination is recommended for all females aged ≤26 years who have not completed the vaccine series. History of genital warts, abnormal Papanicolaou test, or positive HPV DNA test is not evidence of prior infection with all vaccine HPV types; HPV vaccination is still recommended for these persons

Ideally, vaccine should be administered before potential exposure to HPV through sexual activity; however, females who are sexually active should still be vaccinated. Sexually active females who have not been infected with any of the HPV vaccine types receive the full benefit of the vaccination. Vaccination is less beneficial for females who have already been infected with one or more of the HPV vaccine types.

A complete series consists of 3 doses. The second dose should be administered 2 months after the first dose; the third dose should be administered 6 months after the first dose.

Although HPV vaccination is not specifically recommended for females with the medical indications described in Figure 2, "Vaccines that might be indicated for adults based on medical and other indications," it is not a live-virus vaccine and can be administered. However, immune response and vaccine efficacy might be less than in persons who do not have the medical indications described or who are immunocompetent.

#### 3. Measles, mumps, rubella (MMR) vaccination

*Measles component:* Adults born before 1957 can be considered immune to measles. Adults born during or after 1957 should receive  $\geq$ 1 dose of MMR unless they have a medical contraindication, documentation of  $\geq$ 1 dose, history of measles based on health-care provider diagnosis, or laboratory evidence of immunity.

A second dose of MMR is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) have been previously vaccinated with killed measles vaccine; 3) have been vaccinated with an unknown type of measles vaccine during 1963—1967; 4) are students in postsecondary educational institutions; 5) work in a health-care facility; or 6) plan to travel internationally.

*Mumps component:* Adults born before 1957 can generally be considered immune to mumps. Adults born during or after 1957 should receive 1 dose of MMR unless they have a medical contraindication, history of mumps based on health-care provider diagnosis, or laboratory evidence of immunity.

A second dose of MMR is recommended for adults who 1) are in an age group that is affected during a mumps outbreak; 2) are students in postsecondary educational institutions; 3) work in a health-care facility; or 4) plan to travel internationally. For unvaccinated health-care workers born before 1957 who do not have other evidence of mumps immunity, consider administering 1 dose on a routine basis and strongly consider administering a second dose during an outbreak.

Rubella component: Administer 1 dose of MMR vaccine to women whose rubella vaccination history is unreliable or who lack laboratory evidence of immunity. For women of childbearing age, regardless of birth year, routinely determine rubella immunity and counsel women regarding congenital rubella syndrome. Women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and before discharge from the health-care facility.

### 4. Varicella vaccination

All adults without evidence of immunity to varicella should receive 2 doses of single-antigen varicella vaccine unless they have a medical contraindication. Special consideration should be given to those who 1) have close contact with persons at high risk for severe disease (e.g., health-care personnel and family contacts of immunocompromised persons) or 2) are at high risk for exposure or transmission (e.g., teachers; child care employees; residents and staff members of institutional settings, including correctional institutions; college students; military personnel; adolescents and adults living in households with children; nonpregnant women of childbearing age; and international travelers).

Evidence of immunity to varicella in adults includes any of the following: 1) documentation of 2 doses of varicella vaccine at least 4 weeks apart; 2) U.S.-born before 1980 (although for health-care personnel and pregnant women birth before 1980 should not be considered evidence of immunity); 3) history of varicella based on diagnosis or verification of varicella by a health-care provider (for a patient reporting a history of or presenting with an atypical case, a mild case, or both, health-care providers should seek either an epidemiologic link with a typical varicella case or to a laboratory-confirmed case or evidence of laboratory confirmation, if it was performed at the time of acute disease); 4) history of herpes zoster based on health-care provider diagnosis; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

Assess pregnant women for evidence of varicella immunity. Women who do not have evidence of immunity should receive the first dose of varicella vaccine upon completion or termination of pregnancy and before discharge from the health-care facility. The second dose should be administered 4–8 weeks after the first dose.

### 5. Influenza vaccination

Medical indications: Chronic disorders of the cardiovascular or pulmonary systems, including asthma; chronic metabolic diseases, including diabetes mellitus, renal or hepatic dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications or human immunodeficiency virus [HIV]); any condition that compromises respiratory function or the handling of respiratory secretions or that can increase the risk of aspiration (e.g., cognitive dysfunction, spinal cord injury, or seizure disorder or other neuromuscular disorder); and pregnancy during the

influenza season. No data exist on the risk for severe or complicated influenza disease among persons with asplenia; however, influenza is a risk factor for secondary bacterial infections that can cause severe disease among persons with asplenia.

Occupational indications: Health-care personnel and employees of long-term care and assisted-living facilities.

Other indications: Residents of nursing homes and other long-term care and assisted-living facilities; persons likely to transmit influenza to persons at high risk (e.g., in-home household contacts and caregivers of children aged 0–59 months, or persons of all ages with high-risk conditions); and anyone who would like to be vaccinated. Healthy, nonpregnant adults aged  $\leq$ 49 years without high-risk medical conditions who are not contacts of severely immunocompromised persons in special care units can receive either intranasally administered live, attenuated influenza vaccine (FluMist  $^{\textcircled{\$}}$ ) or inactivated vaccine. Other persons should receive the inactivated vaccine.

#### 6. Pneumococcal polysaccharide vaccination

Medical indications: Chronic pulmonary disease (excluding asthma); chronic cardiovascular diseases; diabetes mellitus; chronic liver diseases, including liver disease as a result of alcohol abuse (e.g., cirrhosis); chronic alcoholism, chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]); immunosuppressive conditions; and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close to HIV diagnosis as possible.

Other indications: Alaska Natives and certain American Indian populations and residents of nursing homes or other long-term care facilities.

#### 7. Revaccination with pneumococcal polysaccharide vaccine

One-time revaccination after 5 years for persons with chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); or immunosuppressive conditions. For persons aged  $\geq$ 65 years, one-time revaccination if they were vaccinated  $\geq$ 5 years previously and were aged <65 years at the time of primary vaccination.

#### 8. Hepatitis A vaccination

Medical indications: Persons with chronic liver disease and persons who receive clotting factor concentrates.

Behavioral indications: Men who have sex with men and persons who use illegal drugs.

Occupational indications: Persons working with hepatitis A virus (HAV)—infected primates or with HAV in a research laboratory setting.

Other indications: Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A (a list of countries is available at <a href="https://www.cdc.gov/travel/contentdiseases.aspx">wwwn.cdc.gov/travel/contentdiseases.aspx</a>) and any person seeking protection from HAV infection.

Single-antigen vaccine formulations should be administered in a 2-dose schedule at either 0 and 6–12 months (Havrix $^{\mathbb{R}}$ ), or 0 and 6–18 months (Vaqta $^{\mathbb{R}}$ ). If the combined hepatitis A and hepatitis B vaccine (Twinrix $^{\mathbb{R}}$ ) is used, administer 3 doses at 0, 1, and 6 months.

#### 9. Hepatitis B vaccination

Medical indications: Persons with end-stage renal disease, including patients receiving hemodialysis; persons seeking evaluation or treatment for a sexually transmitted disease (STD); persons with HIV infection; and persons with chronic liver disease.

Occupational indications: Health-care personnel and public-safety workers who are exposed to

blood or other potentially infectious body fluids.

Behavioral indications: Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than 1 sex partner during the previous 6 months); current or recent injection-drug users; and men who have sex with men.

Other indications: Household contacts and sex partners of persons with chronic hepatitis B virus (HBV) infection; clients and staff members of institutions for persons with developmental disabilities; international travelers to countries with high or intermediate prevalence of chronic HBV infection (a list of countries is available at <a href="https://www.cdc.gov/travel/contentdiseases.aspx">www.cdc.gov/travel/contentdiseases.aspx</a>); and any adult seeking protection from HBV infection.

Settings where hepatitis B vaccination is recommended for all adults: STD treatment facilities; HIV testing and treatment facilities; facilities providing drug-abuse treatment and prevention services; health-care settings targeting services to injection-drug users or men who have sex with men; correctional facilities; end-stage renal disease programs and facilities for chronic hemodialysis patients; and institutions and nonresidential daycare facilities for persons with developmental disabilities.

Special formulation indications: For adult patients receiving hemodialysis and other immunocompromised adults, 1 dose of 40  $\mu$ g/mL (Recombivax HB $^{\circledR}$ ), or 2 doses of 20  $\mu$ g/mL (Engerix-B $^{\circledR}$ ) administered simultaneously.

### 10.Meningococcal vaccination

*Medical indications:* Adults with anatomic or functional asplenia, or terminal complement component deficiencies.

Other indications: First-year college students living in dormitories; microbiologists who are routinely exposed to isolates of *Neisseria meningitidis*; military recruits; and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the "meningitis belt" of sub-Saharan Africa during the dry season [December—June]), particularly if their contact with local populations will be prolonged. Vaccination is required by the government of Saudi Arabia for all travelers to Mecca during the annual Hajj.

Meningococcal conjugate vaccine is preferred for adults with any of the preceding indications who are aged  $\leq$ 55 years, although meningococcal polysaccharide vaccine (MPSV4) is an acceptable alternative. Revaccination after 3–5 years might be indicated for adults previously vaccinated with MPSV4 who remain at increased risk for infection (e.g., persons residing in areas in which disease is epidemic).

### 11.Herpes zoster vaccination

A single dose of zoster vaccine is recommended for adults aged  $\geq$ 60 years regardless of whether they report a prior episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless a contraindication or precaution exists for their condition.

## 12. Selected conditions for which *Haemophilus influenzae* type b (Hib) vaccine may be used

Hib conjugate vaccines are licensed for children aged 6 weeks–71 months. No efficacy data are available on which to base a recommendation concerning use of Hib vaccine for older children and adults with the chronic conditions associated with an increased risk for Hib disease. However, studies suggest good immunogenicity in patients who have sickle cell disease, leukemia, or HIV infection or who have had splenectomies; administering vaccine to these patients is not contraindicated.

### 13.Immunocompromising conditions

Inactivated vaccines are generally acceptable (e.g., pneumococcal, meningococcal, and influenza [trivalent inactivated influenza vaccine]), and live vaccines generally are avoided in persons with immune deficiencies or immune suppressive conditions. Information on specific conditions is available at <a href="https://www.cdc.gov/vaccines/pubs/acip-list.htm">www.cdc.gov/vaccines/pubs/acip-list.htm</a>.

#### Is the vaccine safe?

The hepB vaccine is very safe. The most common side effect is soreness at the place where the shot was given.

Before babies are given the hepB vaccine, their parents should be given a form called Hepatitis B Vaccine, What You Need To Know. This form gives information about the vaccine. Parents are asked to read the form and then talk with the doctor or nurse if they have questions.

## Should older children get the hep B vaccine?

All children and teenagers should get the hepB vaccine. Parents can talk to their children's doctor or nurse about getting the vaccine.

### Should anyone else get the shots?

People should get the hepB vaccine if they:

- live with someone who has the hepatitis B virus
- have more than one sexual partner
- have a sexually transmitted disease
- are a hemodialysis patient
- get blood products
- have liver disease
- come into contact with blood at their jobs
- inject drugs

#### **More information**

For more information, call your child's doctor, local health department, or the Michigan Department of Community Health Perinatal Hepatitis B Prevention Program at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

#### **Websites**

Michigan Department of Community Health www.michigan.gov/hepatitisb

Centers for Disease Control and Prevention (CDC)

www.cdc.gov/hepatitis

Immunization Action Coalition www.immunize.org

Hepatitis B Information and Support List www.hblist.org

### PROTECT YOUR CHILDREN TODAY BY HAVING THEM GET THEIR HEPATITIS B SHOTS!

Michigan Department
of Community Health

Total

Jennifer M. Granholm, Governor
Janet Olszewski, Director

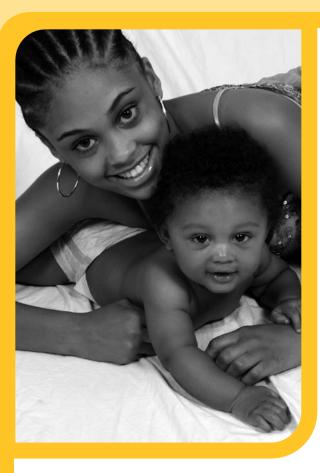
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Rev. 11/06



## HEPATITIS B: What Parents Need to Know

With special information for pregnant women



### What is hepatitis B?

Hepatitis B is a disease caused by a virus that infects the liver. People often show no signs of having the virus. Most people who get the virus get better in a few months, but some carry the virus in their blood all their lives (they are called carriers). In the United States, about 51,000 people get hepatitis B every year, and about one million people are carriers.

 $\nabla$ 

Babies can get hepatitis B at birth if their mother has the hepatitis B virus.



Babies and young children may also get hepatitis B if they come into contact with blood or body fluids from their mother or from people they live with who have hepatitis B. The younger you are when you get hepatitis B, the more likely you will become a carrier of the disease.

## How do you get hepatitis B?

You can get it:



### • at birth, if your mother has the virus

- by having sex or sharing needles with someone who has the virus
- by sharing personal things like razors and toothbrushes with a person who has the virus

One out of three people with the hepatitis B virus does not know how he or she got it.

## How do you know if you have hepatitis B?

Hepatitis B can make you feel tired or sick and can sometimes make your skin and eyes yellow.

Many people don't know they have hepatitis B, because they don't feel or look sick. Even if you don't look or feel sick, you can still get liver disease and give hepatitis B to others.

The only way to know if you have hepatitis B is to get a blood test.



Women should be tested for hepatitis B surface antigen (HBsAg) during EACH pregnancy to see if they have the hepatitis B virus.

## How can babies be safe from getting hepatitis B?

- If a test shows that a pregnant woman has the hepatitis B virus in her blood, her baby can get this virus at birth. Babies born to women who have the hepatitis B virus need:
  - hepatitis B immune globulin (HBIG) and hepatitis B (hepB) vaccine WITHIN TWELVE HOURS OF BIRTH
  - a second shot of hepB vaccine at one to two months of age
  - a third shot at six months of age
  - a blood test three to nine months after the last shot to make sure that they are safe from getting the hepatitis B virus

Babies born to women who do NOT have the hepatitis B virus should also get the hepB vaccine:

- starting at birth
- at one to two months of age
- on or after six months of age



#### MOTHERS...

Take this card with you when you go to the hospital. Give it to your nurse. This is one more way to help protect your baby from getting the hepatitis B virus.

## Don't share hepatitis B with your baby.

You have the hepatitis B virus in your blood, and you could give this virus to your baby at birth. If your baby does get hepatitis B, he or she could become ill. Your baby could also give the virus to others.



#### How to protect your baby ...

Babies born to mothers who have the hepatitis B virus should get:

- Hepatitis B immune globulin (HBIG) and hepatitis B (hepB) vaccine within 12 hours of birth
- A second dose of hepB vaccine one-two months after the first dose
- A third dose at six months of age
- A blood test at nine to eighteen months of age (3 months after the completion of the vaccine series)

If you have questions about this program, or about how to get free hepB vaccine or free blood tests for your baby, household or sexual contacts, please call the Michigan Department of Community Health Perinatal Hepatitis B Program at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.





### **STATE OF MICHIGAN**

#### DEPARTMENT OF COMMUNITY HEALTH

## Official State of Michigan Immunization Record

10218507326 Gender: M MCIR ID#: **Patient ID#:** 

Age: 2 Months 25 Days Name: Michigander, Little March 26, 2008 DOB: 01/01/2008

As of:

**Provider:** Assessment indicates that vaccinations are overdue and should be administered today if not

medically contraindicated.

History of Shots Given by Series							
Vaccine Series Dose#1 Dose#2 Dose#3 Dose#4 Dose#5 Dose#6 Dose#7							
Hepatitis B	01/01/2008						
Various Immune Globulins	01/02/2008						

Immunization Status and Shots Needed								
Vaccine Series	Next Dose Due	Accelerated Due Date	<b>Recommended Date</b>	Overdue Date				
DTP/DTaP/DT/Td/Tdap	1	02/12/2008	03/01/2008	04/01/2008				
Polio	1	02/12/2008	03/01/2008	04/01/2008				
MMR	1	01/01/2009	01/01/2009	04/01/2009				
Hib	1	02/12/2008	03/01/2008	03/01/2008				
Hepatitis B	2	01/29/2008	03/01/2008	06/01/2008				
Varicella	1	01/01/2009	01/01/2009	04/01/2009				
Pneumococcal Conjugate	1	02/12/2008	03/01/2008	04/01/2008				
Rotavirus	1	02/12/2008	03/01/2008	03/25/2008				
Hepatitis A	1	01/01/2009	01/01/2009	07/01/2009				
Influenza	1	07/01/2008	07/01/2008	07/01/2008				

Shots given Today									
Vaccine Type	Date	<b>Dose Qnty</b>		Mfg	Lot#	VIS Date	Signature		

Signature:	<b>Date:</b> /	/
0		

## INDIVIDUAL IMMUNIZATION RECORD

BR	IN			MMUNIZATIONS	
NAME (Last, First, N	∕lido	dle)			
BIRTHDATE / /		BIF	RTH NAME		
VACCINE		TYPE OF VACCINE	DATE GIVEN Mo/Day/Year	HEALTH PROFESSIONAL OR CLINIC	DATE NEXT DOSE DUE
Diphtheria-	1		Wio/Day/Teal	011 0211110	5002502
Tetanus- Pertussis	2				
(DTaP/DTP/DT/	3				
Td/Tdap)	4				
	5				
	7				
	8				
	9				
Haemophilus Influenza type B	1				
(Hib)	3				
	4				
Hepatitis B	1				
(HepB)	2				
	3				
D-II- (IDV/ODV)	4				
Polio (IPV/OPV)	2				
	3				
	4				
Pneumococcal	1				
Conjugate (PCV7)	2				
,	3				
Rotavirus (Rota)	1				
Trotal Trotal	2				
	3				
Hepatitis A	1				
(HepA)	3				
Measles-Mumps-	1				
Rubella (MMR)	2				
Varicella (Var)	1				
Chickenpox	2	- f - b' - b			
Meningococcal	1	of chickenpox			
(MCV4/MPSV4)	2				
Human Papillomavirus	1				
(HPV4)	2				
7 . 0: 1	3				
Zoster Shingles Pneumococcal	1				
Polysaccharide PPV23					
Influenza					
(TIV/LAIV)**					
	_				
	Ĺ				
	_				
			1		
Other					
	L				
* Influenza vaccine	<u> </u>	mmondet: '	anna fra	to year Diagon -tt	ishigan/f
* Influenza vaccine for the most curre	nt cl	mmendations ch hanges, or call yo	ange rrom year i ur local health d	to year. Please check <u>www.m</u> epartment.	ıспіуап.gov/flu

Combination vaccines should always be documented under each antigen. Please see note section on other side.

#### STATE OF MICHIGAN

#### OFFICIAL IMMUNIZATION RECORD For Children and Adults

Name: Sex: □ F □ M Birthdate: Special Problems: Physician/Clinic: Name Telephone Parent/Guardian: Name Telephone Getting immunized is a life-long job that prevents serious diseases.

- Children 11-12 years of age need shots to prevent tetanus, diphtheria, pertussis (whooping cough), and meningococcal disease. Girls should receive human papillomavirus vaccine.
- All adults (not just the elderly) need vaccines to protect them from severe illnesses.
- Many people need yearly influenza vaccine. Ask if you or one of your family members should get flu vaccine.

Keep track of the immunizations you and your child have received.

- Bring your immunization card to every medical visit. This is necessary for children and adults.
- Ask to have your card updated every time vaccines are given.
- The Michigan Care Improvement Registry (MCIR) keeps immunization records for Michigan residents. Ask if the vaccine you or your child received is entered in MCIR.3
- Children must meet Michigan's immunization requirements to enroll in any nursery, day care, preschool or head start program, and public or non-public school.

\*"Under Public Act 540 of 1996 and he Administrative Rules [R325.163] which govern the immunizations given to children, a physician who administers immunizations to a child under the age of 20 years is required to report this information to the Michigan Care Improvement Registry (MCIR), formally the Michigan Childhood Immunization Registry."

FOR MORE INFORMATION: Call your health care provider, local health department, 1-888-767-4687, www.michigan.gov/immunize or www.cdc.gov/vaccines AUTHORITY: ACT 368 1978 DCH-0592 (01/2008)

Notes: